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STATE OF NEW YORK

STATE COMMISSION IN LUNACY

TENTH ANNUAL REPORT

October 1, 1897, to September 30, 1898

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PETER M. WISE, <i>President</i>	} <i>Commissioners</i>
GOODWIN BROWN,	
WILLIAM L. PARKHURST,	

T. E. McGARR, *Secretary*

TRANSMITTED TO THE LEGISLATURE APRIL 10, 1899

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STATE OF NEW YORK

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IN ASSEMBLY.

APRIL 10, 1899

STATE COMMISSION IN LUNACY

TENTH ANNUAL REPORT

STATE OF NEW YORK:

STATE COMMISSION IN LUNACY,
ALBANY, *April* 10, 1899 }

To the Speaker of the Assembly:

By direction of the Commission I have the honor to transmit herewith the annual report of the State Commission in Lunacy for the year beginning October 1, 1897, and ending September 30, 1898.

T. E. MCGARR,

Secretary

CONTENTS

VOLUME I

PART I—STATE SYSTEM.

CHAPTER 1.

	PAGE
General operations	9
Whole number of committed insane.....	9
Receipts and expenditures.....	9
Movement of patient population.....	12

CHAPTER 2.

Appropriations for state hospitals.....	13
Yearly increase in number of insane.....	14
Cost of maintenance or fixed charges of the state hospitals.....	15
Needs of state hospitals for 1898-99.....	20
Appropriation for maintenance.....	20
Appropriation for buildings, repairs and improvements.....	20

CHAPTER 3.

Standard of care and maintenance.....	23
---------------------------------------	----

CHAPTER 4.

Dietaries of state hospitals.....	29
Cost of food supplies.....	30

CHAPTER 5.

Preliminary report on dietaries for hospitals for the insane.....	31
Food and its functions.....	31
Dietary standards	48
Grouping of food materials by proportions of nutrients.....	50
Dietaries in hospitals for the insane.....	70
Recommendations	102
Chemical composition of food materials.....	104
Nutrients obtained for ten cents in different foods at ordinary prices	113

Preliminary report on dietaries for hospitals—(Continued).	PAGE
Binghamton state hospital—total food materials and nutrients used in one year.....	120
Buffalo state hospital—total food materials and nutrients used in one year.....	128
Hudson River state hospital—total food materials and nutrients used in one year.....	134
Long Island state hospital—total food materials and nutrients used in one year.....	143
Manhattan state hospital—total food materials and nutrients used in one year.....	152
Middletown state hospital—total food materials and nutrients used in one year.....	162
Rochester state hospital—total food materials and nutrients used in one year.....	170
St. Lawrence state hospital—total food materials and nutrients used in one year.....	178
Utica state hospital—total food materials and nutrients used in one year	186
Willard state hospital—total food materials and nutrients used in one year.....	194
 CHAPTER 6.	
Pathological institute	201
Third annual report.....	204
Librarian's report	208
Expenditures for year ending Sept. 30, 1898.....	209
 CHAPTER 7.	
Results of treatment.....	210
 CHAPTER 8.	
Capacity of the state hospitals.....	213
 CHAPTER 9.	
Medical service in state hospitals.....	218
 CHAPTER 10.	
Monthly conferences	221
November estimates 1897.....	222
December estimates 1897.....	224
January estimates 1898.....	246
February estimates 1898.....	254
March estimates 1898.....	275
April estimates 1898.....	298
May estimates 1898.....	322
June estimates 1898.....	338

CONTENTS

vii

	PAGE
Monthly conferences—(<i>Continued</i>).	
July estimates 1898.....	352
August and September estimates 1898.....	365
October and November estimates 1898.....	392

CHAPTER 11.

General review	404
Operations of State hospital system.....	404
Medical service	404
Employees	405
Fuel and light.....	405
Deaths—exclusive of transfers.....	406
Recoveries—exclusive of transfers.....	406
Average purchase price and annual per capita cost of staple articles	407

PART II—LICENSED PRIVATE ASYLUM SYSTEM.

CHAPTER 12.

General administration—Private institutions.....	413
--	-----

CHAPTER 13.

General review	414
Operations of Licensed private asylum system.....	414
Medical service	414
Recoveries	414
Deaths	414

PART III—GENERAL HOSPITAL SYSTEM.

CHAPTER 14.

Insanity within the meaning of the statute.....	417
Report of the committee on the definition of Idiocy.....	420

CHAPTER 15.

Alien and non-resident patients.....	422
Cost of removing patients.....	423

CHAPTER 16.

Industrial employment of the insane.....	426
--	-----

PART IV—STATISTICS.

CHAPTER 17.

	PAGE
State hospitals, tables.....	431
Number of registered insane.....	431
General statement	434
Causes of insanity.....	438
Form of insanity.....	440
Results of treatment in presumably curable cases.....	444
Duration of insanity previous to admission and period under treatment of patients discharged recovered.....	447
Causes of death.....	449
Hereditary tendency to insanity.....	452
Civil condition of patients.....	453
Degree of education of patients.....	454
Duration of insanity previous to admission and period under treatment of patients who died.....	455
Ages of patients admitted.....	457
Ages of patients discharged recovered.....	458
Ages of patients who died.....	459
Duration of insanity previous to admission of patients admitted during year	460
Period of residence in asylum of patients under treatment.....	460
Occupation of patients admitted.....	461
Nativity of patients admitted.....	462
Residence by counties and classification of patients admitted...	464
Residence by counties and classification of patients remaining under treatment	468
Licensed private asylum system.....	476
Matteawan state hospital for insane criminals, tables.....	477
Movement of population.....	477
General statement	478
Causes of insanity.....	480
Forms of insanity.....	481
Results of treatment in presumably curable cases.....	482
Duration of insanity previous to admission and period under treatment of patients discharged recovered.....	485
Causes of death.....	486
Hereditary tendency to insanity.....	487
Civil condition of patients.....	487
Degree of education.....	488
Duration of insanity previous to admission and period under treatment of patients who died.....	489
Ages of patients admitted.....	490
Ages of patients discharged recovered.....	490
Ages of patients who died.....	491

Matteawan state hospital for insane criminals—(Continued).	PAGE
Duration of insanity previous to admission of patients admitted during year	492
Period of residence in asylum of patients under treatment.....	492
Occupation of patients.....	493
Nativity of patients.....	495
Residence by counties and classification of patients admitted...	496
Residence by counties and classification of patients remaining under treatment	498



**PART V—OFFICIAL DIRECTORY OF STATE HOSPITALS
AND PRIVATE INSTITUTIONS.**

CHAPTER 18.

Official directory of hospitals and private institutions.....	503
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TENTH ANNUAL REPORT

ALBANY, *March* 10, 1899

To the Legislature:

In compliance with section 9 of chapter 545 of the laws of 1896, constituting chapter 28 of the general laws, which requires that "the Commission shall annually report to the legislature its acts and proceedings for the year ending September 30th last preceding, with such facts with regard to the management of the institutions for the insane as it may deem necessary for the information of the legislature, including an estimate of the amounts required for the use of the state hospitals and the reasons therefor, and also the annual reports made to the Commission by the boards of managers of each state hospital and by the State Charities Aid Association," the State Commission in Lunacy herewith presents its tenth annual report, covering the fiscal year beginning October 1, 1897, and ending September 30, 1898.

Repeating what in substance has been observed in previous reports, it may fairly be held to be both proper and useful that a report treating of subjects which directly affect all of the insane of the state, now numbering over 22,000, and the vast and diversified interests, social, moral and material, which are related to the disposition of that class of the population, should not confine itself to matters exclusively or especially concerning

the legislature, but should widen its scope to include other affairs relating to this Department of the state government—such affairs as may rightfully claim the attention not only of those personally engaged in conducting or serving institutions for the care and treatment of the insane, but also of the general public, especially of that large number of persons who pay direct taxes for the support of the state government, one of whose largest expenditures is for the maintenance of the dependent insane. As to this great body of taxpayers it is presumable, if not certain, that they are interested in knowing how the lunacy laws are being administered from year to year, and how far the object for which such great sums of public money are expended is secured in the actual operation of the present system. Hence, to properly inform all readers who are or who may become interested in the topics of which such a report treats, will necessarily involve some repetition and some reiteration of matters already familiar to the legislature through previous reports or communications made by the Commission to it or to its committees during the session.

As far as it has been found practicable to do so, this report discusses only those subjects which presented themselves within the fiscal year from October 1, 1897, to September 30, 1898, but in order to more fully apprise the legislature of existing conditions which may require or modify its action, some matters have been referred to which have arisen since the close of the fiscal year.

For the purpose of making the report as intelligible as possible in regard to the many interests of which it must treat, it has been deemed wise to follow in the main the plan previously adopted of subdividing the report into principal parts, as follows:

VOLUME 1

Part 1. State system.

Part 2. Licensed private asylum system.

Part 3. General hospital system.

Part 4. Statistics.

Part 5. Asylum directory.

VOLUME 2

Report of Utica State Hospital.

Report of Willard State Hospital.

Report of Hudson River State Hospital.

Report of Middletown State Homoeopathic Hospital.

Report of Buffalo State Hospital.

Report of Binghamton State Hospital.

Report of St. Lawrence State Hospital.

Report of Rochester State Hospital.

Report of Long Island State Hospital.

Report of Manhattan State Hospital.

Report of Collins State Homoeopathic Hospital.

Report of State Charities Aid Association.

Respectfully submitted,

PETER M. WISE,

President.

GOODWIN BROWN,

WILLIAM L. PARKHURST,

Commissioners.

VOLUME I

PART I

STATE SYSTEM

CHAPTER 1

GENERAL OPERATIONS

The whole number of committed insane in the state, public and private, on September 30, 1898, was 22,386. The whole number of insane in state hospitals, including the inmates of the Matteawan State Hospital for Insane Criminals (686 patients), on September 30, 1898, was 21,531. The whole number of insane in licensed private institutions was 855.

RECEIPTS AND EXPENDITURES

Receipts

The general receipts from all sources for support of the state hospitals for the fiscal year ending September 30, 1898, were:

1. Proceeds of state tax for support of the insane.	\$4,957,684 26
2. Receipts from private and reimbursing patients and miscellaneous sources.....	244,734 73
	<hr/>
Total receipts	\$5,202,418 99
	<hr/> <hr/>

Expenditures

The expenditures for the same period were:

1. Cost of maintenance, including officers' salaries, employees' wages, clothing, food, ordinary repairs, and all incidental expenses whatsoever, comprising what are known as fixed charges (\$185.20 per patient).....	\$3,821,620 70
2. Expenditures on account of new buildings to be occupied by patients and employees.....	563,180 84
3. Expenditures for new buildings other than those occupied by patients and employees..	293,905 75

General Operations

4. Expenditures for repairs, renewals and improvements and furniture, not included in fixed charges or maintenance, the amount necessarily being large owing to the necessity of improving as rapidly as possible the Manhattan and Long Island state hospitals, which were in an unusually dilapidated condition prior to their transfer to the state, especially the heating, lighting and plumbing systems	\$448,501 25
5. Expenditures for the maintenance of the Commission and of the Pathological Institute, deportation of aliens and non-residents, salaries and expenses of special agents, etc.....	115,210 90
Total expenditures	<u>\$5,242,419 44</u>

If the balance on hand at the beginning of the fiscal year is included in the receipts, the expenditures will be found to about equal the total income. It will be remembered that in some previous years the expenditures have apparently exceeded the income. But it should be noted that the appropriations practically cover a period of two years—in other words, while an appropriation in terms is made for but one year, it is, unless sooner expended, available during another year. It has been the purpose of the Commission during recent years to expend no more money than was appropriated for its use, although by the legislature of 1897 it was required “to the fullest extent deemed practicable to provide additional buildings for the removal of the insane from Hart’s Island and Blackwell’s Island departments of the Manhattan State Hospital and from the Flatbush department of the Long Island State Hospital,” and legislative authority was given to use such money as might be necessary, in advance of its collection, for the purpose of providing additional buildings for the proper care of the insane.

General Operations

For example, in chapter 460, laws of 1897, it is provided "such sum or sums as may be necessary to provide for additional accommodations for the insane and for other necessary buildings, repairs and improvements at the state hospitals shall be advanced by the treasurer, on the warrant of the comptroller, in anticipation of the collection of the tax above described, and shall be available upon the passage of this act for such purposes."

In actual practice the appropriations for the state hospitals having been made in lump sums, and there being, from the nature of the case, a constant necessity to continue their use beyond the nominal term for which they were made, it has resulted that one appropriation would overlap another; but as above stated, an examination will show that for several years past the Commission has, on the average, kept strictly within the appropriations made by the legislature. It is true that during the year ending September 30, 1897, the expenditures were considerably in excess of the gross income. On the contrary, for the year ending September 30, 1896, the expenditures were very much less than the income, owing mainly to the failure of the Manhattan State Hospital to come into the state hospital system, as contemplated by the legislature, when the tax for the year ending September 30, 1896, was levied.

Reference may properly be made here to the fact that the expenditures for and on account of the state hospitals have relatively been diminishing for several years, for, while the aggregate number of the dependent insane has increased, the appropriations have not kept pace with such increase. To illustrate this more definitely, it is only necessary to state that a careful examination of the expenditures for the state hospitals for the thirty years from 1865 to 1894 inclusive, shows that the per capita cost to the state for the average number of patients for each year during that whole period exceeded \$345 per patient, while the present average expenditure per patient for all purposes does not exceed \$255, a diminution of over \$90 per patient.

General Operations

MOVEMENT OF PATIENT POPULATION

The average number of patients during the fiscal year was 20,635. The whole number of admissions, including transfers from one institution to another, was 5,542. The whole number of original admissions from homes, poorhouses, etc., on commitment, exclusive of transfers, was 4,473. The whole number discharged, including transfers to other institutions, was 3,151. The whole number of deaths was 1,757.

The number discharged is divided as follows: Recovered, 1,018; transferred to other institutions, 1,069; discharged to homes and to the custody of friends or public officials, 1,004; not insane, 60.

Percentage of recoveries:

On the number admitted from homes, etc., on original commitments and exclusive of transfers from one institution to another.....	22.76
On the daily average population.....	4.93
On the number discharged, including deaths, but excluding transfers to other institutions.....	26.52
On the number discharged, not including deaths, and excluding transfers to other institutions.....	48.89

Percentage of deaths:

On the number admitted from homes, etc., on original commitments.....	39.06
On the daily average population.....	8.51
On the number discharged to homes, friends, etc., exclusive of transfers.....	45.76

Further reference may be had to the above subjects in the separate chapters, where they are treated more in detail, and in the statistical tables.

CHAPTER 2

APPROPRIATIONS FOR STATE HOSPITALS

Beginning with the year 1895, the system which had theretofore prevailed of making special appropriations for and on account of each state hospital was discontinued, and a gross sum was appropriated, to be expended by the state hospitals under a system of estimates to be approved by the Commission. Experience shows that this system has had most satisfactory results, and the Commission would strongly deprecate any return to the methods which formerly prevailed, if due regard is to be had to an economical expenditure of the state's money.

Theoretically it would be obvious that this is the true method to follow; and in practical experience it was repeatedly found that when each hospital was left to secure its own appropriation at the hands of the legislature, not only would the aggregate sums asked for largely outrun the actual needs of the several institutions, but a disreputable species of log-rolling and lobbying would be resorted to, members from the localities affected by the expenditures being naturally insistent that the institution in which they were specially concerned should receive at least as much consideration as any other.

As an inevitable consequence appropriations were determined, not by any comprehensive consideration of the real wants or the best development of the hospitals, but by the chance issue of relative success in convincing or influencing committees of the two houses on behalf of this or that object.

Under the present practice the amount of money available for all purposes is definitely known. Out of this sum the maintenance or fixed charges must be met, and the remainder is then applied to buildings, repairs and improvements.

Appropriations for State Hospitals

As further showing the advantages of making a gross appropriation for all the state hospitals, it may be pointed out—this matter is also referred to in chapter 1—that while there is a considerable increase in the number of insane each year, the appropriations and the expenditures have not at all kept pace with such increase. While the increase in the number under treatment each year runs from 600 to 1,000—the actual increase during the past year being 634—during the thirty years from 1864 to 1895, inclusive, the expenditures for the average number of patients per year, for all purposes, including maintenance or fixed charges, buildings, repairs and improvements, amounted to \$345 per year per capita, while the present per capita rate of expenditure is only \$255. During the coming year, if the expenditure is not increased by reason of an unusual increase in the number of patients, this average will be considerably reduced.

During the past year the reduction in expenditures on account of maintenance has been most gratifying, the amount per capita having fallen to \$185.20, while the standard of care has been thoroughly maintained. This result has been reached largely through the enforcement of economies made possible by purchases of supplies on joint account, by the manufacture of staple articles in certain hospitals for the benefit of all, and in other ways which will be more definitely treated in another place.

For convenience of reference, the average expenditures for maintenance or fixed charges, subdivided into the classifications adopted in the submission of the estimates, are given as follows:

(Form 883)

COST OF MAINTENANCE OR FIXED CHARGES OF THE STATE HOSPITALS

Statement showing yearly, monthly, weekly and daily per capita cost for fixed charges or maintenance of state hospitals for the year beginning October 1, 1897, and ending September 30, 1898.

Daily average number of patients, 20,627. Yearly per capita, \$183.20.*

Appropriations for State Hospitals

CLASSIFICATION	Total expenditures	Yearly per capita	Monthly per capita	Weekly per capita	Daily per capita
1 Officers' salaries	\$255,288 20	\$12.38	\$1.03	\$0.238	\$0.034
2 Employees' wages:					
Administration department	119,179 76	5.78	.482	.111	.0158
Financial department	46,526 59	2.26	.188	.043	.0062
Ward service	637,671 98	31.88	2.657	.613	.0873
Domestic service	24,987 52	1.21	.101	.023	.0033
Kitchen service	72,908 21	3.53	.294	.068	.0097
Bakery service	16,165 26	.78	.065	.015	.0021
Meat cutters	11,127 23	.54	.045	.01	.0015
Laundry service	39,103 69	1.90	.158	.036	.0052
Engineer's department	139,936 02	6.78	.565	.13	.0186
Building department	74,769 68	3.62	.302	.07	.0091
Industrial department	42,663 98	2.07	.172	.04	.0056
Farm and grounds department	71,768 61	3.48	.29	.067	.0085
Railway department	1,956 00	.10	.008	.002	.0003
New York city office, Manhattan State Hospital ..	1,167 97	.06	.005	.001	.0002
Steamboat department	3,722 58	.18	.015	.004	.0005
	1,223,655 08	\$64.17	\$5.347	\$1.333	\$0.1738
3 Provisions and stores:					
Farinaceous foods	\$177,539 76	\$8.61	\$0.717	\$0.166	\$0.0236
Yeast	4,764 03	.23	.019	.004	.0006
	\$182,303 79	\$8.84	\$0.736	\$0.17	\$0.0242

* Collins State Hospital not included; opened in August, 1898

Appropriations for State Hospitals

COST OF MAINTENANCE, ETC., OF THE STATE HOSPITALS—(Continued)

CLASSIFICATION	Total expenditures	Yearly per capita	Monthly per capita	Weekly per capita	Daily per capita
3 Provisions and stores—(Continued):					
Fresh meats.....	\$283,511 83	\$13.74	\$1.145	\$0.284	\$0.0376
Poultry	10,186 21	.49	.041	.01	.0014
Salt and smoked meats.....	47,526 37	2.31	.192	.044	.0063
Fresh fish	27,153 97	1.32	.11	.025	.0036
Salt fish	21,647 88	1.05	.087	.02	.0029
	\$390,026 26	\$18.91	\$1.575	\$0.363	\$0.0518
Fresh vegetables.....	\$66,954 90	\$3.25	\$0.27	\$0.062	\$0.0029
Canned vegetables.....	11,491 11	.56	.046	.011	.0015
	78,446 01	\$3.81	\$0.316	\$0.07	\$0.0104
Fresh fruits	\$10,844 47	\$0.53	\$0.044	\$0.01	\$0.0014
Dried fruits	18,281 29	.89	.074	.017	.0024
Preserves and jellies	2,048 22	.10	.008	.002	.0003
	31,173 98	\$1.52	\$0.126	\$0.029	\$0.0041
Dairy products	\$333,915 86	\$16.19	\$1.35	\$0.31	\$0.0444
Wet groceries	17,784 07	.86	.072	.017	.0024
Dry groceries	118,698 97	5.75	.48	.111	.0158
Condiments	2,392 77	.12	.01	.002	.0003
	138,875 81	\$6.73	\$0.563	\$0.13	\$0.0185
Total food supplies	\$1,154,741 71	\$56.00	\$4.665	\$1.076	\$0.1535

Appropriations for State Hospitals

[illegible]

Appropriations for State Hospitals

COST OF MAINTENANCE, ETC., OF THE STATE HOSPITALS—(Continued)

CLASSIFICATION	Total expenditures	Yearly per capita	Monthly per capita	Weekly per capita	Daily per capita
3 Provisions and stores—(Continued):					
Fresh meats.....	\$283,511 83	\$13.74	\$1.145	\$0.264	\$0.0376
Poultry	10,186 21	.49	.041	.01	.0014
Salt and smoked meats.....	47,526 37	2.31	.192	.044	.0063
Fresh fish	27,153 97	1.32	.11	.025	.0036
Salt fish	21,647 88	1.05	.087	.02	.0029
	\$390,026 26	\$18.91	\$1.575	\$0.363	\$0.0518
Fresh vegetables.....	\$66,954 90	\$3.25	\$0.27	\$0.062	\$0.0089
Canned vegetables.....	11,491 11	.56	.046	.011	.0015
	78,446 01	\$3.81	\$0.316	\$0.07	\$0.0104
Fresh fruits	\$10,844 47	\$0.53	\$0.044	\$0.01	\$0.0014
Dried fruits	18,281 29	.89	.074	.017	.0024
Preserves and jellies	2,048 22	.10	.008	.002	.0003
	31,173 98	\$1.52	\$0.126	\$0.029	\$0.0041
Dairy products	\$333,915 86	\$16.19	\$1.35	\$0.31	\$0.0444
Wet groceries	17,784 07	.86	.072	.017	.0024
Dry groceries	118,698 97	5.75	.48	.111	.0158
Condiments	2,392 77	.12	.01	.002	.0003
	138,875 81	\$6.73	\$0.563	\$0.13	\$0.0185
Total food supplies	\$1,154,741 71	\$56.00	\$4.665	\$1.076	\$0.1535

Appropriations for State Hospitals

Water and ice	\$39,679 85	39,679 85	\$1.92	\$0.16	\$0.037	\$0.0053
Laundry supplies	\$19,582 13	19,582 13	\$0.95	\$0.079	\$0.018	\$0.0026
Crockery and glassware	\$9,165 26		\$0.44	\$0.037	\$0.008	\$0.0012
Tin and ironware	8,351 95		.40	.033	.008	.0011
Cutlery and plated ware	2,061 03		.10	.008	.002	.0003
Wooden ware	2,819 85		.11	.009	.002	.0003
Household supplies	21,236 94		1.03	.086	.02	.0028
Toilet articles	5,951 74		.29	.024	.006	.0008
		49,070 91	\$2.37	\$0.197	\$0.046	\$0.0065
			\$01.24	\$5.101	\$1.177	\$0.1679
4 Ordinary repairs:						
Engineers' department	\$27,216 40		\$1.32	\$0.11	\$0.026	\$0.0036
Carpenters' department	17,811 03		.86	.072	.016	.0024
Painting department	16,112 46		.75	.065	.015	.0021
Masons' department	4,331 66		.21	.018	.004	.0006
Electrical department	4,205 18		.20	.017	.004	.0005
Tinsmith's department	3,443 42		.17	.014	.003	.0005
		\$73,190 16	\$3.55	\$0.296	\$0.008	\$0.0097
5 Farm and grounds:						
Farm feed	\$36,064 85		\$1.75	\$0.146	\$0.034	\$0.0048
Wagons, sleighs and harness	6,248 00		.30	.025	.008	.0008
Farm and garden implements	5,390 49		.26	.022	.005	.0007
Lawns, roads and grounds	1,060 88		.05	.004	.001	.0001
Farm supplies	12,961 97		.63	.053	.012	.0017
Horticulture supplies	3,496 34		.17	.014	.003	.0005
Stable maintenance	4,576 19		.22	.018	.004	.0006
Live stock	11,889 45		.58	.048	.011	.0016
Rentals	3,923 00		.19	.016	.004	.0006
		\$5,611 17	\$4.15	\$0.346	\$0.08	\$0.0114
Clothing	\$192,820 14	192,820 14	\$9.35	\$0.779	\$0.18	\$0.0286

COST OF MAINTENANCE, ETC., OF THE STATE HOSPITALS—(Continued)

Appropriations for State Hospitals

CLASSIFICATION	Total expenditures	Yearly per capita	Monthly per capita	Weekly per capita	Daily per capita
7 Furniture and bedding:					
Furniture	\$28,918 11	\$1.40	\$0.117	\$0.027	\$0.0038
Bedding	39,741 27	1.93	.161	.037	.0053
Window furniture	2,206 42	.11	.009	.002	.0003
Table linen	14,679 97	.71	.059	.014	.0019
	\$85,545 77	\$4.15	\$0.346	\$0.08	\$0.0113
8 Books and stationery:					
Stationery supplies	\$24,928 19	\$1.21	\$0.10	\$0.023	\$0.0033
Books	2,474 24	.12	.01	.002	.0003
Periodicals	1,156 42	.06	.005	.001	.0002
	\$28,558 85	\$1.39	\$0.115	\$0.026	\$0.0038
9 Fuel and light:					
Fuel	\$305,708 72	\$14.82	\$1.235	\$0.285	\$0.0406
Lights	12,084 83	.59	.048	.011	.0016
	\$317,793 55	\$15.41	\$1.283	\$0.296	\$0.0422
10 Medical supplies:					
Medicines	\$19,591 44	\$0.95	\$0.079	\$0.018	\$0.0026
Medical and surgical supplies	8,003 37	.39	.032	.007	.0011
Laboratory supplies	1,202 51	.06	.005	.001	.0002
	\$28,797 32	\$1.40	\$0.116	\$0.026	\$0.0039
11 Miscellaneous:					
Traveling expenses	\$7,862 22	\$0.38	\$0.032	\$0.007	\$0.001
Entertainment of patients	25,402 30	1.23	.108	.024	.0033

Appropriations for State Hospitals

Supply transportation	27,893 69	1.33	.113	.026	.0037
Messages, telephone and telegraph	9,503 45	.46	.038	.008	.0013
Miscellaneous	56,374 74	2.70	.225	.052	.0074
	127,043 40	\$6.12	\$0.511	\$0.117	\$0.0167
12 Transportation of patients	\$19,431 06	\$0.94	\$0.078	\$0.018	\$0.0026
Grand total	\$3,800,744 29	\$184.25	\$15.348	\$0.354	\$0.505

By the Commission.

T. E. MCGARR,

Secretary

ALBANY, November 18, 1898

* Collins State Hospital not included ; opened in August, 1898

Appropriations for State Hospitals

An examination of the above tabulated statement of maintenance or fixed charges will, the Commission believes, satisfy not only the legislature but all those who appear to have believed that the expenditures of the state hospitals were too high. It may be confidently asserted that, for the care and treatment given and the results obtained, these expenditures are lower than in similar institutions anywhere in this country.

The needs of the state hospitals for the coming fiscal year may be briefly summed up as follows:

1. An appropriation for maintenance or fixed charges. The Commission determined to reduce the amount somewhat below what it was for the past fiscal year, namely, \$185.20, including the newly created Collins State Hospital, and therefore fixed it at \$184 for the estimated number of 21,000 patients, which will make the sum required \$3,882,400.

2. The sum necessary for buildings, repairs and improvements and for extraordinary purposes, if the same amount appropriated last year should be renewed, namely \$5,000,000, and the same revenue from private and reimbursing patients and miscellaneous sources (namely, \$250,000) should be received, there would be a total of \$5,250,000 from which to deduct the amount required for maintenance or fixed charges. This would leave a remainder of \$1,367,600, which may be devoted to the maintenance of the Pathological Institute, the expenses of the State Commission in Lunacy, special agents, deportation of aliens and non-residents, buildings, repairs and improvements and extraordinary expenditures. To meet the present requirements of the state hospital system, at least so far as accommodations for patients are concerned, a much larger sum than the legislature will appropriate is needed. Under the provisions of the acts of 1895-6, incorporating the Long Island and Manhattan state hospitals, certain departments of those institutions as then existing are to be vacated and the patients removed elsewhere. Within a few months following the close of the fiscal year covered by this report the patients will have been removed from the Hart's Island department of the Manhattan State Hospital,

Appropriations for State Hospitals

and under the laws above referred to there will remain necessary the following removals: The patients on Blackwell's Island to be removed elsewhere, 839; the patients at the Flatbush department of the Long Island State Hospital to be removed elsewhere, 1,119. To this must be added the increase for two years, estimated at 700 per year, 1,400 in all, since it requires about two years from the time of an appropriation of money to complete the erection of buildings. There is also an excess of patients over the present capacity of the hospitals of 189, making a total number of patients for whom accommodations are to be provided 3,547.

At the per capita rate of \$500, which is the limit imposed by law, the cost for supplying these accommodations would be \$1,773,500, a sum greatly in excess of that which will be available, assuming that the present rate of expenditure is to be continued.

It is needless to say the necessity for additional accommodations is greatest in Greater New York. As pointed out elsewhere, the statute of 1897 required the Commission to make provision as rapidly as possible for the removal of the patients from the Long Island and Manhattan state hospitals. Plans have already been adopted, and it is expected that soon after the close of the fiscal year covering this report, work will be commenced at the Central Islip department of the Manhattan State Hospital, which will provide for 2,200 patients. During the coming fiscal year it is expected that at least \$600,000 can be expended on account of this building, so that the sum available for buildings, repairs and improvements elsewhere and extraordinary expenditures for the state hospitals, after payment of the expenses of the State Commission in Lunacy and Pathological Institute, will amount to the sum of \$737,000.

As showing the estimated needs of the state hospitals for the fiscal year beginning October 1, 1898, reference may be had to the reports of the several hospitals, as to necessary improvements, as follows:

Appropriations for State Hospitals

Utica.	\$115,427
Willard.	220,250
Hudson River	182,425
Middletown.	271,350
Buffalo.	104,000
Binghamton.	79,350
St. Lawrence	248,169
Rochester.	326,460
Long Island	106,432
Manhattan.	700,000
Collins.	109,000
<hr/>	
Total	\$2,462,863
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Of course the foregoing statement of the requirements of the state hospitals, as made up by their respective managers, shows a large excess over the resources of the Commission likely to be available in that year, since the rate of expenditure will no doubt be subject to the same limitation as before. In the judgment of the Commission the appropriation for 1897-98, like those of several previous years, was inadequate; but it has done all it could to secure the best results attainable from the expenditure of the money at its disposal.

Undoubtedly a larger outlay might have secured better buildings, admitting of more extended classification of patients, with a probable increase in the recovery rate, which result would be a great actual economy to the state, as it has been repeatedly shown that the ultimate charge for every patient admitted to a state hospital who is not discharged recovered or improved amounts to about \$6,000, an appalling total when it is considered in all its aspects.

CHAPTER 3

STANDARD OF CARE AND MAINTENANCE

With the establishment of the policy of state care for all the insane on a basis that insures freedom from legislative disturbance, it is to be hoped, for many years to come, there naturally come into view questions which, in the shadow of the greater one, were more or less obscured. Criticisms appear now and then from sources entitled to attention relative to the standard of maintenance and care; but these criticisms are not uniform; some advocating a standard too low, while others uphold a scale of maintenance too high for dependent persons. When the state undertook the care of all its insane wards the act was, in itself, an assurance that there would be prescribed a uniform standard as regards all the essential elements that enter into the care and treatment of such persons. Herein was a radical difference from former methods, when each county was permitted to maintain its own grade of care. This uniformity of standard applies to quality and quantity of food supplies, to medical service, to number and efficiency of nurses and attendants, to amusements and diversion, and to the general environment as far as it can be controlled by the circumstances and locality of the several institutions. It has been the constant effort of the Commission to maintain the insane in such a manner as to meet the approval of the public and of your honorable body.

It may be thought by some that the distinction upon which rest the two chief classifications of the insane in state hospitals, namely, the acute or recent cases, who are amenable to treatment and of whom the probability of recovery and a safe return to private life is always predicable, and the chronic cases who have passed beyond the period of probable restoration and

Standard of Care and Maintenance

are likely to remain a charge to the state throughout their natural lives, that this distinction is too broadly taken or is carried too far in practical effect. But those who hold this view lose sight of the fact that not only is it the duty of the state in a humanitarian sense to care for its dependent insane, but it is the highest economic wisdom to provide in the most liberal measure all the appliances and all the means of intelligent treatment that can tend to promote recovery, since each case thus successfully treated relieves the institution of further cost of maintenance, and converts a state burden into a self-supporting member of the community. This subject has been discussed at length in another place and need not be further elucidated. In behalf of this result, and in the hope to facilitate the great end of recovery whenever possible, the Commission's policy respecting the acute class of patients has been to supply all needed means of restoration. It has been the intention of the Commission to provide these means without stint, and superintendents and medical officers of institutions have been enabled to avail themselves of every facility that could tend to recovery of the curable insane without regard to the standard which may or should apply to the chronic insane. The former class, however, forms only a small proportion of the 22,000 insane persons in the care of the state, and as the data contained in statistical table No. 3 will show, it is a variable quantity. Approximately it may be placed at 10 per cent. of the total insane population. The great body of insane persons in state hospitals belong to the chronic class, and it is with this class that comparisons are usually made between the state standard of care and that which obtained in county hospitals and almshouses. From the opening of its first insane asylum, at Utica, and for many years afterwards, the policy of the state was to receive into its institutions only the recent or curable cases, and as they lapsed into what is called "chronicity," to relieve the institutions of their presence by discharging them into the hands of county authorities, to be cared for in such local ways as they might be able or willing to provide—often of the crudest

Standard of Care and Maintenance

and most unsatisfactory, and sometimes of the most repulsive character, as was fully set forth in the Commission's first annual report. Although the insane who have passed a certain period without recovery, and in whose case the disease appears to have reached a chronic stage, present few recoveries, yet it is true that even in this condition there are not only some absolutely good recoveries, but, more frequently, a return to a mental state that justifies their care at home and may sometimes enable them to lead a useful life in the community. On the one hand, therefore, it would be impolitic, unwise and wrong to assign all the chronic insane to incurability, but on the other hand it would not be justifiable to put this class of the insane under the same expensive hospital conditions in which the acute or recent cases are properly placed. Hence it becomes a question worthy of very serious consideration how far the hospital standard should be applied to the chronic class. It is obvious that in view of the possible cure of these cases they should have skilled medical observation, whereby any hopeful change will be sure to be recognized in its early stage and the individual patient be singled out for remedial influences. It is also proper that the attendants in charge of this class should be kind, humane, skilled and sufficient in numbers to guarantee good care. It is also manifest that the food supplies should be of good quality, sufficient in quantity and of reasonable variety. These are the three principal elements which enter into the care of the insane, and they constitute three-fourths of the cost of maintenance. Other items of cost are clothing, which should be sufficient to insure the comfort of the patient; amusement and diversion, which should be ample enough to prevent the lapse into dementia which deadens the intellect and destroys all possibility of recovery; transportation of patients; expenditures for maintenance and repairs of buildings, and for the farm and grounds and environment; miscellaneous expenses of a smaller kind, such as books, stationery, bedding, furniture, etc. With reference to the medical service that should be devoted to this class of cases as differentiated from the acute insane, it is quite impossible to run any exact line of proportion in view of the close

Standard of Care and Maintenance

relations which exist between the several classes in the hospitals, but the Commission estimates that for the chronic class one physician can sufficiently attend and observe 400 patients, whereas for the acute class 50 patients supply an ample and busy service for one physician. When the two classes are considered together the proportion is about one to 200, and up to the present time this has been reckoned the proper proportion of medical officers to patients. The extent of attendance upon the chronic insane depends somewhat upon the kind of their insanity, whether it require constant and active control or whether it be of a nature to permit the patient to wholly or partly care for himself or herself. The safe average has been computed at one attendant for 12 patients, although, as in regard to medical officers, it is quite impossible in state hospitals to make a separate computation for this class alone. The acute insane, many of them requiring each a day and a night attendant during the active period of the disease, obviously need a much larger ratio of nurses, but if the two classes are considered together the proportion may be computed at one nurse or attendant for 9 patients, and, as a matter of fact, at the present time this is the standard ratio.

The matter of food supplies has received the most careful and serious attention of the Commission, and, as shown in another chapter, has been treated largely from a scientific standpoint. It is believed that with the experience obtained in the last few years, applied to the scientific treatment now being accorded the food question, the dietary standard that will be established will be eminently proper. It will represent a physiological basis particularly adapted to the insane, and will be within a limit of cost which certainly cannot be criticised.

A desirable consummation, and one which it is hoped may ultimately be reached, is a better defined separation of the hospital and so-called asylum cases in our state hospitals. This can only be done by means of construction adapted to the end in view, viz: an actual separation of the classes. In the more recently constructed institutions this division is now measurably well reached, and after all the insane have been accommo-

Standard of Care and Maintenance

dated in proper domiciles it will not only be good policy but true economy to provide hospital accommodations in separate buildings for the acute insane. At the present time this division is made tentatively in wards, but it is apparent that where the acute and chronic cases mix in congregate dining-rooms distinction in diet would involve much embarrassment and difficulty. The Commission believes that upon proper examination no fair-minded person will be inclined to complain of extravagance in the maintenance of the insane in state institutions. Certainly when it is considered that the average cost of food supplies for the insane of all classes under care is but \$0.1535 per day it will not be thought too high. If any movement toward reducing this average were to be made it must needs be largely in the direction of diminishing attendants or physicians; but such a change would be sure to end in a lower grade of observation and care and might induce to some extent a return to practices now obsolete, such as mechanical restraint and untidiness in the condition of patients which were marked features in county care. Abolition of the use of restraining apparatus is a beneficent feature of the improved care of the insane, and it was accomplished chiefly, if not solely, by a better medical observation and an increase in the number of attendants or nurses. In short, nursing has been substituted for mechanical restraint, and the result has been most salutary, as anyone who was acquainted with the conditions of twenty years ago and who visits a state hospital at the present day cannot help but observe. The wards have become quiet where there was formerly pandemonium; patients have become docile, neat and industrious who were formerly disorderly and destructive of their clothing; a feeling of content has become general where formerly great discontent prevailed; and as a result, in their daily interior aspect, the institutions have taken on a homelike appearance which contrasts most strikingly with their former repellant condition. Does anyone seriously propose that the causes which have made this result possible be removed and the old state of things be renewed? It is doubtful whether any right-minded citizen would favor such a reactionary proposition.

Standard of Care and Maintenance

Notwithstanding the valid argument herein set forth the Commission still believes that there is room for retrenchment and economy, and that the best attainable conditions do not yet exist. It does affirm, however, that there is constant progression, and that year after year, under the present system, will see changes in present practice tending more and more to economy as well as efficiency. As a matter of fact, the past year, notwithstanding a very large increase in the cost of food supplies, has developed a lower rate of maintenance than was ever heretofore reached by the state in its care of the insane. It is possible that the present year will show a still further reduction, and it may be that this process will continue for several years to come, but it should not be concluded that this result indicates any lowering of the standard. It is due to economical methods which have come from experience and to the introduction of joint or combined purchases for the uses of the several hospitals, resulting in a saving by all. It is in this direction, rather than in any modification of the standard, that future economies are anticipated. It is probable also that, as the efficiency of nurses is largely promoted through the agency of training schools, the ratio of nurses to patients may be decreased. In several institutions this result has already followed, and although the per capita cost of experienced nurses, especially trained for this work, is perhaps greater than that of ordinary nurses, yet the aggregate cost is lower and the net result is a saving. Whatever end is aimed at, whether for a reduction or an elevation in the standard of care, such changes should be gradual and not arbitrary. We submit that the results obtained under state care have proven it to be an economical as well as an humane system, and that coming years will show this to be true beyond all question. If the legislature should not approve of the grade of care given to the insane wards of the state, such disapproval should be manifested in a manner to permit the Commission to make any changes desired in a gradual manner, but it believes that upon a proper investigation no change of this nature will be suggested.

CHAPTER 4

THE DIETARIES OF STATE HOSPITALS

Approximately one-third of the moneys appropriated for the care and maintenance of the insane is expended for food supplies. Hence the dietaries for the insane have received most careful consideration by the Commission. With a view to establishing a dietary neither too profuse nor too stinted, inquiries have been made as to the practice in insane hospitals in other states and countries. Through the estimate system it is possible for the Commission to establish approximate uniformity in the state hospitals, and this is being accomplished as rapidly as possible. Certain rations for food consumption govern the revision of the estimates by the Commission, and up to the present time a dietary standard submitted by Dr. Austin Flint has been the basis for such revision. This ration, however, in actual practice has been found excessive, and some reductions as well as other modifications have been made. The question became so vast and intricate that the Commission sought advice from the most reliable sources within its reach. In this particular, Prof. W. O. Atwater, of Wesleyan University, who as special agent of the United States Department of Agriculture has charge of nutrition investigations conducted by that branch of the government, and one of whose official functions is the consideration of food standards, was asked to co-operate with and assist the Commission. His aid has been of manifold use, not only as to economies in the cost of foods, but as to enlarging the physiological efficiency of the ration prescribed. It has been found that some foods have been used in excess which, from the standpoint of nutrition, were unduly expensive, and by the substitution of other articles in sufficient quantities abundant

The Dietaries of State Hospitals

nutriment could be supplied at the same time that economy in cost could be effected. It is unfortunate that out of all the dietary studies that have been made for the benefit of so many different social classes and in relation to persons and families in different avocations as well as to classes in institutions, no such studies have been made in relation to the insane. Under the supervision of Prof. Atwater studies of this kind are now in progress, aided by the co-operation of the several medical superintendents of the state hospitals. When completed it will be possible to create dietaries upon accurate physiological bases, not only for the insane as a whole, but also for the various classes of the insane. It is thought that after the completion of this work, dietaries fully as efficient as the one in present use, if not more so, and subserving an economy approximately estimated at 15 per cent of the present cost, can be formulated.

When it is remembered that the cost of food supplies for one year aggregates \$1,200,000, the possible saving can be readily appreciated. These studies being conducted in a scientific manner and upon positively reliable data will be of world-wide benefit, and accrue to the welfare not only of the people and the insane of our own state, but equally so to that of other states and countries.

The dietary standard furnished by Prof. Flint has served an excellent purpose and has been a potent aid to the Commission in providing a physiological food supply to the state hospitals. As the author stated in his recommendations, in the absence of reliable data, his standard should be considered experimental, and it is this stage that the Commission now considers as practically closed.

In order to show the trend of the present investigation, a preliminary statement of Prof. Atwater addressed to the State Commission in Lunacy is herewith appended.

CHAPTER 5

PRELIMINARY REPORT ON DIETARIES FOR HOSPITALS FOR THE INSANE

BY W. O. ATWATER

The purpose of the present article is to discuss some of the principles upon which proper dietaries for the population of hospitals for the insane should be based, to give the results of preliminary examinations of dietaries of New York hospitals, to show the reasons for more accurate and thorough experimental inquiry in this direction than has thus far been prosecuted, and to make certain tentative suggestions regarding hospital dietaries.

FOOD AND ITS FUNCTIONS

As this report will naturally fall into the hands of those who have not made a special study of the subject of food and nutrition, and many of the results of the very active experimental inquiry of the past few years have not yet become current, and furthermore, as some of the technical terms here used are unfamiliar to many readers, the following explanations are adapted from previous publications by the writer.*

Food is that which, when taken into the body, builds up its tissues and keeps them in repair, or which is consumed in the body to yield force and heat. It is used to form the tissues and fluids of the body, such as muscle, blood, bone, and brain, and to repair their waste. If the food is in excess of the daily requirements, it may be stored in the body. The material thus stored is principally fat. When food or body tissue is consumed in the

* See especially Farmers' Bulletins Nos. 23, 34 and 74 of the United States Department of Agriculture, and article on "Food and Diet" in the Year Book of that department for 1894. For more detailed discussions of the subject, see Bulletin 21 of the Office of Experiment Stations of the same department on Investigations of the Chemistry and Economy of Food.

Preliminary Report on Dietaries for Hospitals for the Insane

system, the energy which was latent therein becomes active and manifests itself in the force or heat required for the various bodily uses.

The best foods are those which perform their functions in the most normal and complete manner; that is, with as little waste as possible and with the best physiological results. We usually judge of the value of a food by several different standards. Thus, it should be digestible and palatable, it should "agree with" the eater, it should furnish the ingredients needed by the system in proper amounts, and it should be reasonably cheap.

Some food materials contain inedible portions, such as bone, shell, skin, etc. The edible portion of food materials consists of water and of some or all of the four classes of nutritive ingredients or nutrients—protein, fat, carbohydrates, and mineral matter.

NUTRIENTS OF FOOD

The following are familiar examples of compounds of each of the four principal classes of nutrients:

PROTEIN	Proteids.	<i>Albuminoids</i> , e. g., albumen (white of eggs); casein (curd) of milk; myosin; the basis of muscle (lean meat); gluten of wheat, etc.
		<i>Gelatinoids</i> , e. g., collagen of tendons; ossein of bones; which yield gelatin or glue, etc.
		Meats and fish contain very small quantities of so-called "extractives." They include kreatin and allied compounds, and are the chief ingredients of beef-tea and meat-extract. They contain nitrogen, and hence are commonly classed with protein.
		<i>Fats</i> , e. g., fat of meat; fat (butter) of milk; olive oil; oil of corn, wheat, etc.
		<i>Carbohydrates</i> , e. g., sugar, starch, cellulose (woody fiber), etc.
		<i>Mineral matters</i> , e. g., phosphate of lime, sodium, chloride (common salt), etc.

THE FUEL VALUE OF FOOD

Heat and muscular power are forms of energy. The energy is developed as the food is consumed in the body. It is measured in the laboratory by means of an apparatus called the calorimeter. The unit commonly used is the calorie, which is approximately the amount of heat which would raise the temperature of a pound of water four degrees Fahrenheit.

Taking ordinary food materials as they come, the following general estimate has been made for the average amount of heat and energy in 1 pound of each of the classes of nutrients:

Preliminary Report on Dietaries for Hospitals for the Insane

	Calories.
In 1 pound of protein.....	1,860
In 1 pound of fats.....	4,220
In 1 pound of carbohydrates.....	1,860

In other words, when we compare the nutrients in respect to their fuel values, their capacities for yielding heat and mechanical power, a pound of protein of lean meat or albumen of egg is just about equivalent to a pound of sugar or starch, and a little over 2 pounds of either would be required to equal a pound of the fat of meat or butter or the body fat.

NUTRITIVE RATIO

As the chief function of both fats and carbohydrates is to serve as fuel it is of more importance that the total amount of the two be appropriate than that they should be in definite relative proportion to each other. The ratio between the amount of protein and the other organic nutrients in the food is called the nutritive ratio. More exactly it is the ratio of the digestible protein to the digestible fats and carbohydrates. In ordinary usage, however, it is frequently made to apply to the ratio of the total protein to the total fats and carbohydrates, and it is in the latter sense that it is used in this report. Since the fuel value of fat is about two and one-fourth times that of carbohydrates or protein the quantity of fat is multiplied by two and one-fourth and added to the carbohydrates and the nutritive ratio obtained by dividing this sum by the amount of protein. If the fats and carbohydrates are very largely in excess of the protein the nutritive ratio will be large or, as it is technically called, "wide," becoming "narrower" as the relative amount of protein increases. As a rule the animal foods have the smaller nutritive ratio and the vegetable foods the larger, although to this statement there are many exceptions. A "well balanced" diet is one with a proper nutritive ratio. Hence in calculating the amounts of different food materials for a dietary the nutritive ratios are essential considerations. Physiological

Preliminary Report on Dietaries for Hospitals for the Insane

chemists have devoted a great deal of observation and experimental research to the question of the nutritive ratios most appropriate for the foods of people of various classes in health with different kinds of muscular activity, but as yet only little is definitely known as to the relation between mental activity, normal or abnormal, and the demands for nutrients in food.

HOW FOOD IS USED IN THE BODY

Blood and muscle, bone and tendon, brain and nerve—all the organs and tissues of the body—are built from the nutritive ingredients of food. With every motion of the body, and with the exercise of feeling and thought as well, material is consumed and must be resupplied by food. In a sense, the body is a machine. Like other machines it requires material to build up its several parts, to repair them as they are worn out, and to serve as fuel. In some ways it uses this material like a machine; in others it does not. The steam engine gets its power from fuel; the body does the same. In the one case coal or wood, in the other food, is the fuel. In both cases the energy which is latent in the fuel—the potential energy, as it is called in scientific language—is transformed into heat and power. When the coal is burned in the furnace a part of its potential energy is transformed into the mechanical power which the engine uses for its work; the rest is changed to heat which the engine does not utilize and which, therefore, is wasted. The potential energy of the food is transformed in the body into heat and mechanical power. The heat is used to keep the body warm. The mechanical power is employed for muscular work. The material of which the engine is built is very different from that which it uses for fuel, but part of the material which serves the body for fuel also builds it up and keeps it in repair. Furthermore, the body uses its own substance as fuel. This the steam engine cannot do at all. The steam engine and the body are alike in that both convert the fuel into heat and mechanical power. They differ in that the body uses the same material for fuel as

Preliminary Report on Dietaries for Hospitals for the Insane
for building and also consumes its own material for fuel. In its use of fuel the body is much more economical than any engine.

The body is more than a machine. We have not simply organs to build and keep in repair and supply with energy; we have a nervous organization; we have sensibilities and the higher intellectual and spiritual faculties, and the right exercise of these depends upon the right nutrition of the body.

The chief uses of food, then, are two: (1) To form the material of the body and repair its wastes; (2) to yield heat to keep the body warm and muscular and other power for the work it has to do. In forming the tissues and the fluids of the body the food serves for building and repair. In yielding heat and power it serves as fuel.

The different nutrients of food serve the body in different ways. The principal tissue formers are the protein compounds, especially the albuminoids. These make the flesh of the body. They build up and repair the nitrogenous materials, as the muscles and tendons, and supply the albuminoids of the blood, milk, and other fluids. The chief fuel ingredients of the food are the carbohydrates and fats. These are either consumed in the body when the food is eaten or they are stored as fat to be used as occasion demands.

The albumen of eggs, the casein of milk and cheese, the gluten of wheat, the myosin of lean meat, and the other albuminoids of food are transformed into the albuminoids and gelatinoids of the body. Muscle, tendon, and cartilage are made of albuminoids.

The albuminoids of food also serve as fuel. A dog can live on lean meat; he can convert it into muscle, heat, and muscular power. The gelatinoids of food, as the finer particles of tendon and the gelatin, which is dissolved out of bone and meat in making soup, though somewhat similar to the albuminoids in composition, are not tissue formers. But they are used as fuel and hence are valuable nutrients.

Preliminary Report on Dietaries for Hospitals for the Insane

The albuminoids are sometimes called "flesh formers" or "muscle formers" because the lean flesh, the muscle, is made from them.

The starch of bread and potatoes, and sugar, are burned in the body to yield heat and power. The fats, such as the fat of meat and butter, serve the same purpose, only they are a more concentrated food than the carbohydrates.

The fats of the food may be stored in the body. The body also transforms the carbohydrates of food into fat. This fat, and with it that stored from the fat of food, is kept in the body as a reserve of fuel in the most concentrated form. One chief use of the fat stored in the body is for fuel, to be drawn on in case of need.

The different nutrients can to a greater or less extent do one another's work. If the body has not enough of one for fuel it can use another. But while the protein can be burned in the place of fats and carbohydrates, neither of the latter can take the place of the albuminoids in building and repairing the tissues. At the same time the gelatinoids, fats, and carbohydrates, by being consumed themselves, protect the albuminoids from consumption.

What has been said above about the ways in which our food nourishes us may be briefly summarized as follows:

SUMMARY OF USES OF FOOD

Food supplies the wants of the body in several ways. It either—

Is used to form the tissues and fluids of the body;

Is used to repair the wastes of tissues;

Is stored in the body for future consumption;

Is consumed as fuel, its potential energy being transformed into heat or muscular energy, or other forms of energy required by the body; or,

In being consumed protects tissues or other food from consumption.

Preliminary Report on Dietaries for Hospitals for the Insane

USES OF THE DIFFERENT CLASSES OF NUTRIENTS

Protein forms tissue (muscle, tendon, etc.,) and fat, and serves as fuel.	} All yield energy in form of heat and muscular strength.
Fats form fatty tissue (not muscle, etc.,) and serve as fuel.	
Carbohydrates are transformed into fat and serve as fuel.	

In being themselves burned to yield energy the nutrients protect each other from being consumed. The protein and fats of body tissue are used like those of food. An important use of the carbohydrates and fats is to protect protein (muscle, etc.), from consumption.

BRAIN AND NERVE FOOD

Many theories have been suggested regarding the kinds and amounts of chemical elements and compounds needed and used for the building and repair of brain and nerve and the foods best adapted for people who are engaged in active intellectual work or subjected to nervous strain. The amount of exact information upon this subject is, however, very small. The most that can be said with certainty is that in general the food that is best fitted to supply the physical needs and to keep the body in sound condition is best for mental and nervous exercise.

The above statements apply to people of sound mind. The subject of diet for the insane will be referred to beyond.

DEFINITION OF FOOD AND FOOD ECONOMY

The views above presented lead to the following definitions: (1) Food is that which, taken into the body, builds tissues or yields energy; (2) the most healthful food is that which is best fitted to the wants of the user; (3) the cheapest food is that which furnishes the largest amount of nutriment at the least cost; (4) the best food is that which is both most healthful and cheapest.

We have, then, to consider the kinds and amounts of nutrients in different food materials, their digestibility, and the kinds and amounts needed for nourishment by people doing different kinds of work.

Preliminary Report on Dietaries for Hospitals for the Insane**THE COMPOSITION OF ORDINARY FOOD MATERIALS**

Our common food materials differ greatly in the amounts of nutrients they contain. Of the whole weight of an average piece of beefsteak, round, a little less than one-third would be actual nutritive material. In smoked ham the proportion of nutritive ingredients is larger, being nearly one-half the whole weight. In milk the proportion is a little over one-eighth, in potatoes less than one-fourth, while in wheat flour seven-eighths of the whole weight consists of actual nutrients.

Table A of the appendix, page 103 shows the percentage of different ingredients, refuse, water and nutrients, in a considerable number of food materials as they are ordinarily found in the markets.

In general, the animal foods have the most of protein and fats. The proportions of protein and energy and the nutritive ratios of some of the most common materials are shown in the table on page 54, while the vegetable foods are rich in the carbohydrates, starch and sugar. The lean meats and fish abound in protein. Cheese has so large a quantity of protein because it contains the casein of the milk. Among the vegetable foods, beans and peas have a high proportion of protein. The proportion in oatmeal is also large. In wheat it is moderate, and in corn meal it is rather small. The materials with the highest fuel value are those with the most fat, because the fuel value of the fat is, weight for weight, two and one-fourth times as great as that of either sugar, starch, or protein. Hence fat pork and butter lead the other materials in fuel value. The fat meats in general stand high in this respect. So also do the grains, flour, and meal, as they have large quantities of carbohydrates. Potatoes are quite low in the list in respect to fuel value as well as protein, principally because they are three-fourths water. For the same reason, milk, which is seven-eighths water, ranks low in respect to both protein and fuel value.

It is important to remember that all these estimates apply to the food materials in the form in which we buy them, including

Preliminary Report on Dietaries for Hospitals for the Insane

both refuse, like the bones of meat, skins of potatoes, etc., and water. If we were to remove the bones and other refuse from the meats, fish, and other foods which contain them, and then remove the water from all the materials, and compare the actually nutritive substances or nutrients, their rank would, of course, be very different. Salt codfish, for instance, is a very economical food, because it furnishes protein in an easily digestible form, although, as we buy it, a pound will contain over eight-tenths of a pound of water and refuse. A pound of rice consists of about seven-eighths of a pound, and a pound of potatoes only one-fourth of a pound of nutritive materials, but in cooking the rice we mix water with it and thus make it not very different in composition from potatoes. By drying the potatoes we could get a material very similar in food value to rice.

A number of the most common articles of food are grouped according to their quantities of protein and their fuel values in the schedule herewith. The basis of the grouping in one series is the amount of protein, and in the other the number of calories of energy in each food material. Thus canned corn beef, cheese and beans (dry) contain from 32 to 21 per cent of protein. These proportions are considered "very large." On the other hand oysters, salt pork and potatoes contain very little protein, 5 per cent or less. When we consider the fuel value, the potential energy, the classification is very different. Butter, salt pork, sugar and oatmeal have fuel values varying from 4,200 to 1,700 calories per pound, while a pound of oysters or fresh codfish furnishes a very small amount of energy, 300 calories or less. The reasons for these differences are found not only in the relative proportions of the nutrients, protein, fats and carbohydrates, but also in the amounts of "non-nutrients," refuse and water in the different food materials.

Preliminary Report on Diets for Hospitals for the Insane

TABLE 1

Classification of food materials by composition

GRADATION BY AMOUNTS OF PROTEIN IN 1 POUND	GRADATION BY FUEL VALUES IN 1 POUND
VERY LARGE	
.82 to .21 pound protein Canned corned beef; cheese. Beans, dry.	4,220 to 1,700 calories Butter; salt pork; cheese; smoked ham. Milk crackers; sugar; oatmeal.
LARGE	
.20 to .16 pound protein Canned salmon; beef, round; beef, sirloin; salt codfish; beef, chuck.	1,700 to 1,200 calories Pork, spare rib. Corn (maize) meal; wheat flour; rice; beans, dry; wheat bread.
MEDIUM	
.15 to .11 pound protein Mutton, leg; pork, spare rib; beef, rib; eggs, fresh codfish. Oatmeal; wheat flour.	1,200 to 700 calories Canned corn beef: beef, rib; beef, sirloin canned salmon; beef, chuck; mutton, leg; beef, round; eggs.
SMALL	
.10 to .06 pound protein Smoked ham. Wheat bread; milk crackers; corn (maize) meal; rice.	700 to 300 calories Milk; salt codfish. Potatoes.
VERY SMALL	
.05 pound and less protein Oysters; salt pork; milk; butter. Potatoes; sugar.	300 calories and less Oysters; fresh codfish.

Before leaving the subject of the composition of food materials, a word of caution is in order. The figures in table A in the appendix represent the averages of the analyses now available. But different specimens of the same kind of food materials may vary greatly in composition. This is especially true of meats, because of the variations in the proportions of bone and of fat.

PECUNIARY ECONOMY OF FOOD—CHEAP VS. DEAR FOOD

The cheapest food is that which supplies the most nutriment for the least money. The most economical food is that which is the cheapest and at the same time best adapted to the wants of the user. The maxim that "the best is the cheapest," does not

Preliminary Report on Dietaries for Hospitals for the Insane
apply to food. The best food, in the sense of that which is the finest in appearance and flavor, and which is sold at the highest price, is not generally the cheapest, nor is it always the most healthful or economical.

Of the different food materials which the market affords, and which are palatable, nutritious, and otherwise fit for nourishment, what ones are peculiarly the most economical? There are various ways of comparing food materials with respect to the relative cheapness or dearness of their nutritive ingredients. One, and perhaps the best, consists in comparing the nutrients obtained for a given sum in different materials. On the basis of the analyses in table A and of retail prices such as are common in New York, it is estimated that ten cents invested in the sirloin of beef at 22 cents per pound pays for 7.3 ounces of the meat with 2.4 ounces of actually nutritive material. This would contain 1.1 ounces of protein and 1.3 ounces of fat, and supply 448 calories of energy. The same amount of money paid for oysters at the rate of 50 cents per quart brings 0.8 ounce of actual nutrients, 0.4 ounce of protein, and 82 calories of energy. But in buying wheat flour at \$7 a barrel the 10 cents pays for 2.5 pounds of nutrients with 5 ounces of protein and 4702 calories of energy.

The price of food is not regulated solely by its value for nutriment. Its agreeableness to the palate or to the buyer's fancy makes a large factor of the current demand and market price. There is no more nutriment in an ounce of protein or fat of the tenderloin of beef than in that of the round or shoulder. The protein of animal foods does, however, have an advantage over that of vegetable foods. Animal foods, such as meats, fish, milk, and the like, gratify the palate in ways which most vegetable foods do not, and, what is perhaps of still greater weight in regulating the actual usage of communities by whose demand the prices are regulated, the leaner meats and fish satisfy a real need by supplying protein and fats, which potatoes, corn meal and other vegetable foods lack.

Preliminary Report on Diets for Hospitals for the Insane**ANIMAL VS. VEGETABLE FOODS**

People who can afford it, the world over, will have animal foods and will compete with one another in the prices they give for them. In general, the animal foods are more easily and completely digested than vegetable. There is doubtless good ground for paying somewhat more for the same quantity of nutritive material in the animal food.

For persons in good health the food in which the nutrients are most expensive are like costly articles of adornment. People who can well afford them may be justified in buying them, but they are not economical.

The presence of animal foods in the diet is due not only to custom and desire for variety, but also to the fact that with most people it is one of the most important sources of protein or tissue forming material. At the same time animal foods are more expensive than a large number of the vegetable food materials.

Among vegetable foods we usually distinguish between cereals and their manufactured products, sugars, starches and the like, vegetables and fruits. Of these sub-classes, the cereals are most important. The cereal foods, corn, wheat, barley, buckwheat, etc., and their manufactured products, flours, bread, crackers, etc., not only furnish a very large proportion of the actual nutrients in the ordinary diet, but furnish these nutrients most economically. A given sum expended for wheat flour or corn meal will purchase a much larger amount of nutriment than expended for any other food material, unless it be the dried legumes, beans and peas.

With the exception of a few of the more common vegetables such as potatoes, turnips, beets and onions, the green vegetables and fruits, such as cabbage, lettuce, squash, string beans, tomatoes, apples, oranges, bananas, strawberries, etc., contain a comparatively small proportion of actual nutriment. Their value in many cases lies not so much in the actual amount of nutrients they contain as in the variety and palatableness they give the diet, and in the organic acids and salts, and the mineral

Preliminary Report on Dietaries for Hospitals for the Insane
matters they contain. When used in considerable amounts they largely increase the cost of the food while adding but comparatively little to the actual value of the diet as a source of nutriment.

Estimates of the amounts of nutrients that could be purchased for 10 cents at various rates per pound, are given in table B in the appendix. The calculations are based upon figures similar to those in table A, page 103. The schedule herewith illustrates the difference, and shows the graduation of a small number:

TABLE 2

Classification of food materials by cost of actual nutriment; i. e., by amounts of protein and energy in the quantities bought for 10 cents at ordinary prices per pound.

GRADATION BY AMOUNTS OF PROTEIN IN 10 CENTS' WORTH AT PRICES STATED PER POUND.	GRADATION BY FUEL VALUES OF 10 CENTS' WORTH AT PRICES STATED PER POUND.
VERY CHEAP	
<i>.75 to .26 pound protein</i> Salt codfish, 6 cents. Beans, dry, 4 cents; wheat flour, 2½ cents; oat-meal, 4 cents; corn meal, 2 cents; wheat bread, 4 cents.	<i>9,000 to 3,000 calories</i> Wheat flour, 2½ cents; corn meal, 2 cents; oat meal, 4 cents; beans, dry, 4 cents; sugar, 5 cents; rice, 5 cents; potatoes (60 cents bushel), 1 cent; wheat bread, 4 cents.
CHEAP	
<i>.25 to .18 pound protein</i> Canned corned beef, 12 cents; milk (4 cents quart), 2 cents; skim milk, (8 cents quart), 1½ cents. Potatoes (60 cents bushel), 1 cent.	<i>3,000 to 1,800 calories</i> Salt pork, 12 cents. Milk crackers, 9 cents; wheat bread, 6 cents.
MEDIUM	
<i>.17 to .13 pound protein</i> Cheese, 16 cents; beef, chuck, 12 cents; beef, round, 12 cents; fresh codfish, 8 cents. Wheat bread, 6 cents; rice, 5 cents.	<i>1,800 to 1,000 calories</i> Butter, 24 cents; cheese, 16 cents; smoked ham, 16 cents; pork, spare rib, 12 cents; skim milk (3 cents quart), 1½ cents, milk (4 or 6 cents quart), 2 or 3 cents.
EXPENSIVE	
<i>.12 to .08 pound protein</i> Mutton, leg, 12 cents; pork, spare rib, 12 cents; milk, (6 cents quart), 3 cents. Milk crackers, 9 cents.	<i>1,000 to 500 calories</i> Canned corn beef, 12 cents; beef, chuck, 12 cents; mutton, leg, 12 cents; beef, rib, 16 cents; beef, round, 12 cents, beef, sirloin, 18 cents; salt codfish, 6 cents.
VERY EXPENSIVE	
<i>.07 pound and less protein</i> Smoked ham, 16 cents; salt pork, 12 cents; oysters, 30 cents quart.	<i>500 calories and less</i> Fresh codfish, 8 cents; oysters, 30 cents quart.

Preliminary Report on Dietaries for Hospitals for the Insane

The most striking fact brought out by all these calculations is the difference between the animal and vegetable foods in the actual cost of nutriment. Meats, fish, poultry, and the like are expensive, while flour and potatoes are cheap food. The reason of this is simple. The animal foods are made from vegetable products. Making meat from grass or grain is costly. An acre of land will produce a given number of bushels of wheat, but when the grass or grain which the same land would produce is converted into meat it makes much less food than the wheat.

DIGESTIBILITY OF FOOD*

The value of food for nutriment depends not only upon how much of the nutrients it contains but also upon how much of these the body digests and uses for its support and upon the fitness of the materials for bodily nourishment.

By digestibility of food several things are, or may be, meant. One is the proportion of a given food material or of each of its several constituents which an ordinary person may digest. Another is the ease with which it is digested or the time required by the process. As the word is ordinarily used, however, it includes still another consideration, namely, whether the food material does or does not agree with the user.

The most important factor of digestibility, so far as the nutritive value of food is concerned, is found in the proportions of its different nutrients which can actually be digested by healthy persons and used for nourishment. Considerable experimenting has been done upon this subject. While it is found that different people vary in the amounts which they can digest from the same food, the differences are not so great as might be supposed.

The protein of vegetable foods is rather less completely digested than that of animal foods. Thus, in potatoes and whole wheat and rye flour it may sometimes happen that as much as one-fourth of the protein may escape digestion and thus be use-

* Detailed statements of the results of experiments upon the digestibility of food by man and the effects of cooking upon digestibility may be found in Bulletin No. 21 of the Office of Experiment Stations of the United States Department of Agriculture on the Chemistry and Economy of Food. See also the reports of the Storrs Agricultural Experiment Station for 1896 and 1897.

Preliminary Report on Dietaries for Hospitals for the Insane

less for nourishment. From one-sixth to one-tenth of the protein of wheat flour, corn meal, beans and peas may in like manner be assumed to escape digestion, or rather to leave the body without being used for nutriment. These estimates assume that the materials are cooked and eaten in the usual way. Under the same circumstances, from nine-tenths to the whole of the protein of milk, meats, and fish are assumed to be digested. The digestibility of the fats is likewise variable. Sometimes a large part of the fat of the food fails of digestion. In general it may be assumed that about 5 per cent of the fat of milk, meat, eggs, butter and lard, and a considerably larger proportion of the fats of some vegetable foods will usually escape digestion. When, however, the diet contains a very large amount of fat—for instance, when it consists largely of fat meat—the digestion is less complete. One way in which the fat of ordinary foods is digested is by being made into an emulsion in the intestine. The fat of milk is an extremely fine emulsion and is thus in a sense “predigested” or in a partly digested form before it is taken into the stomach. This may help to explain why it is so easily digested.

The carbohydrates, which make up a large part of vegetable foods, are in general very digestible. Cane sugar is believed to be completely digested, and this is assumed to be the case with the sugar of milk.

THE FITTING OF FOOD TO THE NEEDS OF THE BODY

Different people have different needs for nourishment. All are alike in that they must have protein for the building and repair of the bodily machine and fuel ingredients for warmth and work. But they differ widely in the amounts and proportions they require, and even among those in good health there are many who are obliged to avoid certain kinds of food, while invalids and people with weak digestions must often have special diet.

For people in good health and with good digestion there are two important rules to be observed in the regulation of the diet. The first is to choose the things which “agree” with them, and

Preliminary Report on Dietaries for Hospitals for the Insane
to avoid those which they can not digest and assimilate without harm. The second is to use such kinds and amounts of food as will supply all the nutrients the body needs and at the same time avoid burdening it with superfluous material to be disposed of at the cost of health and strength.

For guidance in this selection nature provides us with instinct, taste and experience. Physiological chemistry adds to these the knowledge—still new and far from adequate—of the composition of food and the laws of nutrition. In our actual practice of eating we are apt to be influenced too much by taste, that is, by the dictates of the palate; we are prone to let natural instinct be overruled by acquired appetite; and we neglect the teachings of experience. We need to observe our diet and its effects more carefully, and regulate appetite by reason. In doing this we may be greatly aided by the knowledge of what our food contains and how it serves its purpose in nutrition.

What kinds of foods best agree with any individual is a matter to be found out by experience. Milk is for most people a very wholesome, digestible and nutritious food, but there are persons who are made ill by drinking it; they should avoid milk. The author knows a boy who is made seriously ill by eating eggs. A small piece of sweet cake in which eggs have been used will cause him serious trouble. The sickness is nature's evidence that eggs are, for him, an unfit article of food. Some people have to avoid strawberries. Indeed, cases in which the most wholesome kinds of food are hurtful to individual persons, are unfortunately, numerous.

How it is that food which contains nothing unwholesome can be so harmful is coming to be explained by the metabolic changes which food undergoes in the body. It appears that in their course through the body the constituents of the food are subject to a great variety of chemical changes, and that some of the compounds formed may at times be harmful in one way or another. Some of the compounds produced are actually poisonous. Different persons are differently constituted with respect to the chemical changes which their food undergoes and the

Preliminary Report on Dietaries for Hospitals for the Insane

effects produced, so that it may be literally true that "One man's meat is another man's poison." Every man must learn from his own experience what food agrees with him and what does not.

On the other hand, some foods have at times a great value outside of their use for nourishment. Fruits and garden vegetables often benefit people greatly, not as nutriment merely, for they may have very little of actual nutrients, but because of the vegetable acids or other substances which they contain, and which sometimes serve a most useful purpose.

Food does more than to build tissue and yield energy. What it does in other ways—its value as medicine rather than nutriment—this is not the place to discuss. Let us return, then, to our subject, which is food economy.

For the great majority of people in good health the ordinary food materials—meats, fish, eggs, milk, butter, cheese, sugar, flour, meal, potatoes, and vegetables—make a fitting diet, and the main question is to use them in the kinds and proportions fitted to the actual needs of the body. This will be best answered by considering the subjects of dietaries and dietary standards.

In the adjusting of diet to the demands of the body two things are especially important. One is that the food "agree" with the user. The other is that it furnish enough protein for the building and repair of tissue and enough energy to keep it warm and do its work. Considering the body as a machine, there must be material to make and keep it in repair and fuel to supply heat and power. If there is not food enough or the nutrients are not in the right proportion, the body will be weak in its structure and inefficient in its work. So, likewise, if there is too much food, damage to health will result.

While this is true as a general principle, and while this principle is the fundamental one in food economy, many modifications in detail are needed to fit the food to the peculiarities of digestion and assimilation of different classes of people and different individuals.

Preliminary Report on Dietaries for Hospitals for the Insane

Thus, people in poor health or with weak digestion or with certain peculiarities of the nutritive system, are often obliged to be very particular in the selection of their food. A man who can ordinarily "eat anything" may be forced, in illness, to live on gruel or beef tea. The numerous food preparations for people with weak digestion are made in response to an actual and pressing need of partially digested, or at least of easily digestible, nutriment. It is nevertheless true for a great majority of people—for nearly every one who is in good health and uses the ordinary standard, wholesome foods—that a healthful diet is that which supplies the quantities of nutrients which the body requires.

Of course, there is a great difference in the requirements of different people. The kinds and amounts of food best fitted for nourishment vary not only with sex, age, size, occupation and climate, but also with the peculiarities of the individual. But it is possible in a general way to estimate the amounts of actual nutrients needed on the average by people of different classes and occupations.

DIETARY STANDARDS*

As the outcome of a great deal of observation and experiment, nearly all in Europe, standards have been proposed for the amounts of nutrients and energy required in the daily food of different classes of people. Those of Prof. Voit, of Munich, Germany, are most commonly accepted by European specialists. Voit's standard for a laboring man at moderately hard muscular work calls for about 118 grams (0.25 pound) of protein and quantities of carbohydrates and fats sufficient with the protein to yield 3,050 calories of energy.

Just what compounds in food are needed for the nutriment of the brain physiological chemistry has yet to tell us, but it is certain that people with little muscular exercise require less food than those who labor. Well-to-do professional men and students in Europe, with less muscular exercise than mechanics, have been found to be well nourished with an average of 0.23 pound

* This subject is discussed in Bulletin No. 21 of the Office of Experiment Stations of the United States Department of Agriculture entitled "Methods and Results of Investigations on the Chemistry and Economy of Food," pp. 206-18.

Preliminary Report on Dietaries for Hospitals for the Insane
of protein and 2,700 calories of energy. In the cases observed in the United States the amounts eaten by professional men have been much larger.

The figures of Table 11, on page 81, which are taken from a large number reported by different investigators, will serve to show how the actual dietaries of people of different classes at home and abroad compare with the standard dietaries which have been proposed. The figures for European dietaries are mostly by Voit and his followers in Germany and by Playfair in England. The American figures are by the writer and his associates. All are based upon either the observations of actual dietaries or upon direct feeding experiments.

The dietary standards given below are intended to represent the average needs as nearly as they can be estimated from the data now at hand. Much more inquiry will be necessary to make them as reliable as is to be desired.

DIETARY STANDARDS.

No.			Protein.	Energy.
			Grams.	Calories.
	EUROPEAN.			
1	Man at moderate muscular work.	Voit	118	3,055
2	Man at moderate muscular work.	Playfair .	119	3,140
3	Woman at moderate muscular work	(I)	92	2,425
4	Aged man, not at active work . .	(I)	100	2,475
5	Aged woman, not at active work.	(I)	80	1,860
6	Men and women "in quietude" .	Playfair .	71	1,950
7	Subsistence diet	Playfair .	57	1,760
	AMERICAN.			
8	Man with moderate muscular work	Atwater .	125	3,500
9	Man with light muscular work . .	Atwater .	112	3,000
10	Man at "sedentary" occupation.	Atwater .	100	2,700
11	Woman with light muscular work	Atwater .	100	2,700
12	Man without work	Atwater .	90	2,400
13	Woman at "sedentary" occupation	Atwater .	90	2,400
14	Woman without work	Atwater .	80	2,100

(1) Voit and his followers of the Munich school of physiologists.
4

Preliminary Report on Dietaries for Hospitals for the Insane

These so-called dietary standards are, at best, only estimates, based upon such data of observation and actual experiments as are obtainable. The reason why my own are more liberal than those of the European investigators quoted is simple. The standard of living in this country is higher than in Europe. People with us are better housed, clothed and fed than there; have more of the comforts and opportunities of life and make more of themselves. With the rest they work harder, accomplish more and earn more money to pay for the better living. To do this they need nourishing food. Speaking broadly, the food needs to be fitted to the work. The amount needed for physical sustenance merely is very small. For that matter, when the work is light very small amounts of protein suffice—much less than these standards call for.

GROUPING OF FOOD MATERIALS BY PROPORTIONS OF NUTRIENTS**NUTRITIVE EQUIVALENTS**

In making estimates for a hospital dietary a certain liberty in the selection of the food materials is very desirable. The object here is to calculate a diet which shall supply the quantities of actual nutrients which are needed by the hospital population. If the calculations be made for a given period, as a week or a month or a year, it is desirable to use such kinds of food as may be most conveniently and economically obtained during that period. Potatoes are a staple food material, but at one time they may be abundant and cheap, while at another time they are scarce and dear. The same is true of carrots, turnips, beets and other like vegetable foods. It may be desirable, therefore, to substitute one of these kinds of vegetables for another, as the supply or cost may require. Corn meal and rice occupy important places in the list, but it is often an advantage to be able to use them in the place of wheat, or substitute one of them for another, or to replace them by rye or barley or buckwheat or other cereal foods. In like manner potatoes

Preliminary Report on Dietaries for Hospitals for the Insane

and cereal products may often be interchanged with great advantage. Beef, likewise, is in constant use, but it will be advantageous to know how much mutton or veal may be used in the place of a hundred pounds of average beef. Often fish or milk may be used in the place of meat, and it will be helpful to know how many pounds of each of these may take the place of a hundred pounds of beef and supply the same amount of nutriment. The meats and other animal foods are expensive, that is to say, the nutriment in them costs much more than in flour or corn meal or other vegetable foods at ordinary prices. Many people use unnecessarily large quantities of the animal foods, and it is often possible to substitute the cheaper vegetable foods without detriment; indeed, this may be done at times with advantage to health. But the leaner meats and fish are richer in protein, and we can hardly use wheat flour or corn meal in their place, because the latter have less protein, that is to say, the leaner meats and fish have narrower and the flour or meal wider nutritive ratios. But we can employ beans or peas or skim-milk, which have larger proportions of protein, with the wheat flour or the corn meal and thus make mixtures which chemical analysis, physiological experiment and common experience unite in showing to be equal in nutritive value to the diet with more meat, while they are far less costly. To make these substitutions, and at the same time maintain the proper balance of tissue forming and fuel ingredients of the total diet, requires a somewhat accurate knowledge of the composition of the food materials and proportions which may be used to replace one another.

In accordance with the desire of the Commission in Lunacy I have attempted, with the assistance of Mr. A. P. Bryant and other gentlemen, to prepare a series of tables which will show the comparative amounts of nutriment or nutritive equivalents of different food materials, and will also show how the common food materials can be divided into groups corresponding with their proportions of nutriment. In preparing these tables we have been much perplexed by the fact that the different ma-

Preliminary Report on Dietaries for Hospitals for the Insane

materials differ so much from one another in composition that it is not easy to make groupings which will be easy for the practical man to understand and for the hospital superintendent or steward to use in the compounding of rations. We have, however, made out a series of tables of nutritive equivalents, but regard them simply as tentative. They are given here with tables of the composition of food materials in the hope that persons who are practically concerned in the calculating of dietaries may find in them information of value. After they have been tested by practical use, and we have had opportunity to learn how they are adapted or unadapted to their purpose, we hope to be able either to improve them or to construct others which will come nearer to meeting the demands of hospitals.

To facilitate the calculation of nutritive equivalents of food and the preparation of tables showing how food materials may be grouped in classes and may be substituted for each other, we have selected a list of food materials most commonly used in the New York hospitals for the insane. In estimating their nutritive values, the factors to be especially considered are the proportions of protein, the fuel values and the nutritive ratios. The figures for these in the selected list of food materials are shown in Table 1 on page 54. The same materials are divided for convenience into sixteen groups (page 59), the members of each group being more or less similar in composition and nutritive value. Taking into account the total amounts of nutrients and the proportions of protein, i. e., nutritive ratios of the different food materials and groups, a series of tables of nutritive equivalents has been constructed to indicate, in a general way, how the different food materials may be substituted one for the other without disturbing the balance of the whole diet.

In order that the reader may understand the tables beyond I will ask him to remember the general explanations given above regarding the composition of food materials, the kinds and amounts of nutrients which they contain and the nutritive ratios and refer him also to Table A in the appendix which gives de-

Preliminary Report on Dietaries for Hospitals for the Insane

tails of composition of such food materials as we find to be in use in the New York hospitals. These explanations and tables having been examined, the following explanations will, I trust, help to an understanding of the tables of nutritive equivalents which follow.

The tables of nutritive equivalents beyond are computed from the figures in Table 1 which follows. The figures, in turn are taken from Table A of the appendix. For the calculations we have used the percentages of protein, the amounts of potential energy (calories) in one pound and the nutritive ratio of each of the food materials.

In Table 1 the food materials are grouped in two ways. The grouping at the left follows the natural order, the same as is observed in Table A. On the right side of the table the same materials are grouped in the order of the nutritive ratios, those with the narrowest ratios being placed first; that is to say, the materials with the largest proportions of protein to the total amounts of nutrients lead, while those with little or no protein come last. An especial object of this arrangement is to bring out clearly the important differences between the different food materials in respect to the ratio of protein to fuel ingredients. In the constructing of dietaries it is important not only to secure proper quantities of total nutrients but also to make the proportions of protein and fuel ingredients, in other words, the nutritive ratios, such as are adapted to the wants of the consumer. These are the two fundamental principles used in the calculations of the tables of nutritive ingredients as well as those for the calculation of dietaries beyond. Bearing these principles in mind such considerations as the following are worthy of note. They are brought out clearly in the figures of Table 1.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE 1
Protein, energy and nutritive ratios of food materials included in tables of nutritive equivalents
[Food materials "as purchased," i. e., including refuse of meats, vegetables, etc.]

MATERIALS ARRANGED IN NATURAL GROUPS.				MATERIALS IN ORDER OF NUTRITIVE RATIOS.			
FOOD MATERIAL.	Protein.	Energy in one pound.	Nutritive ratio.	FOOD MATERIAL.	Protein.	Energy in one pound.	Nutritive ratio.
<i>Animal foods.</i>					Per cent.	Calories.	1:
Beef, side.....	14.8	1,040	2.8	Fresh fish, lean.....	8.6	174	0.8
Veal.....	15.6	555	.9	Fresh fish, fat.....	11.7	385	.8
Lamb, side.....	14.1	1,055	3	Salmon canned.....	19.5	680	.9
Mutton, side.....	13	1,255	4.2	Veal.....	15.6	555	.9
Pork, loin.....	13.4	1,270	4.1	Halibut, smoked.....	19.3	950	1.6
Ham, smoked.....	14.2	1,675	5.3	Milk, skimmed.....	3.4	170	1.7
Pork, side.....	8	2,215	13.8	Eggs.....	11.9	635	1.8
Pork, fat salt.....	1.9	3,670	*	Spinach.....	2.1	110	1.8
Lard and oils.....	.....	4,220	*	Chicken or fowl.....	13.7	775	2
Chicken or fowl.....	13.7	775	2	Asparagus.....	1.8	105	2.1
Turkey.....	16.1	1,075	2.6	Peas, dried.....	24.6	1,655	2.6
Fresh fish, lean.....	8.6	174	.8	Turkey.....	16.1	1,075	2.6
Fresh fish, fat.....	11.7	385	.8	Peas, green.....	3.6	255	2.8
Halibut, smoked.....	19.3	950	1.6	Beans, dried.....	22.5	1,605	2.8
Salmon, canned.....	19.5	680	.9	Beef, side.....	14.8	1,040	2.8
Eggs.....	11.9	635	1.8	Lamb, side.....	14.1	1,055	3
Cheese.....	25.9	1,950	3	Lettuce.....	1	75	3
Butter.....	1	3,605	*	Cheese.....	25.9	1,950	3
Milk, whole.....	3.3	325	4.6	Cauliflower.....	1.8	140	3.1
Milk, skimmed.....	3.4	170	1.7	Celery.....	.9	70	3.1

Preliminary Report on Diets for Hospitals for the Insane

Wheat foods	11.4	1,650	6.8	Beans, green, Lima	3.2	255	3.3
Rye flour	6.8	1,630	11.9	Beans, string	2.1	180	3.6
Corn meal	9.2	1,655	8.6	Beans, dried, Lima	18.1	1,625	3.8
Barley, pearl	8.5	1,650	9.5	Cabbage	1.4	125	3.8
Buckwheat flour	6.4	1,620	12.6	Pork, loin	13.4	1,270	4.1
Oatmeal	16.1	1,860	5.2	Mutton, side	13	1,255	4.2
Rice	8	1,680	9.9	Cucumbers	.7	70	4.4
Wheat bread	9.2	1,215	6.1	Radish	.9	95	4.6
Graham bread	8.9	1,210	6.3	Milk, whole	3.3	325	4.6
Rye bread	9	1,180	6.1	Okra	1.4	155	5
Corn bread	7.7	1,205	7.2	Oatmeal	16.1	1,860	5.2
"Boston" brown bread	5.4	1,050	9.5	Tomatoes	.9	105	5.2
Sugar	.....	1,860	*	Ham, smoked	14.2	1,675	5.3
Beans, dried	22.5	1,605	2.8	Pumpkin	.5	60	5.7
Beans, string	2.1	180	3.6	Leeks	1	130	5.8
Beans, dried, Lima	18.1	1,625	3.8	Rye bread	9	1,180	6.1
Beans, green, Lima	3.2	255	3.3	Wheat bread	9.2	1,215	6.1
Peas, dried	24.6	1,655	2.6	Beets	1.3	170	6.1
Peas, green	3.6	255	2.8	Artichokes	.8	110	6.3
Potatoes	1.8	310	8.3	Graham bread	8.9	1,210	6.3
Potatoes, sweet	1.4	460	16.6	Turnips	.9	125	6.4
Beets	1.3	170	6 1	Wheat flour and Breakfast foods	11.4	1,650	6.8
Parsnips	1.3	240	9	Onions	1.4	205	6.9
Turnips	.9	125	6.4	Squash	.7	105	7.1
Carrots	.9	160	8.5	Corn bread	7.7	1,205	7.2
Radish	.9	95	4.6	Corn, green	1.2	180	7.2
Onions	1.4	205	6.9	Potatoes	1.8	310	8.3
Leeks	1	130	5.8	Carrots	.9	160	8.5

Preliminary Report on Diets for Hospitals for the Insane

TABLE 1 — Protein, energy and nutritive ratios, etc. — (Concluded)

MATERIALS ARRANGED IN NATURAL GROUPS.				MATERIALS IN ORDER OF NUTRITIVE RATIOS.			
FOOD MATERIAL.	Protein.	Energy in one pound.	Nutritive ratio.	FOOD MATERIAL.	Protein.	Energy in one pound.	Nutritive ratio.
Vegetable Foods — (Cont'd)							1:
Pumpkins .....	.5	60	5.7	Corn meal	9.2	1,655	8.6
Squash .....	.7	105	7.1	Parsnips	1.3	240	9
Cucumbers .....	.7	70	4.4	Strawberries .....	.9	175	9.3
Okra	1.4	155	5	Barley, pearl	8.5	1,050	9.5
Corn, green	1.2	180	7.2	"Boston " brown bread	5.4	1,050	9.5
Cabbage	1.4	125	3.8	Rice.....	8	1,630	9.9
Cauliflower.	1.8	140	3.1	Raspberries, dried.....	7.3	1,705	11.5
Lettuce.....	1	75	3	Rye flour	6.8	1,630	11.9
Asparagus	1.8	105	2.1	Apricots	1	255	12.5
Artichokes.....	.8	110	6.3	Raspberries	1	255	12.5
Celery.....	.9	70	3.1	Buckwheat.....	6.4	1,620	12.6
Spinach	2.1	110	1.8	Apricots, dried	4.7	1,290	13.8
Tomatoes.....	.9	105	5.2	Pork, side.....	8	2,215	13.8
Apples, fresh.....	.3	220	35.6	Oranges .....	.6	170	14.5
Apples, dried	1.6	1,350	44	Peaches, canned.....	.7	220	15.8
Apricots.....	1	255	12.5	Potatoes, sweet	1.4	460	16.6
Apricots, dried.....	4.7	1,290	13.8	Bananas .....	.8	300	19
Peaches, canned .....	.7	220	15.8	Apples, fresh.....	.3	220	35.6
Bananas.....	.8	300	19	Apples, dried	1.5	1,350	44
Oranges .....	.6	170	14.5	Fat pork	1.9	3,670	*
Raspberries.....	1	255	12.5	Butter.....	1	3,605	*
Raspberries, dried	7.3	1,705	11.5	Lard and oils.....	.....	4,220	*
Strawberries	9	175	9.3	Sugar .....	.....	1,860	*

* The amount of protein too small for calculation of nutritive ratio.

Preliminary Report on Dietaries for Hospitals for the Insane

Fish have the narrowest nutritive ratio of any of the food materials, the reason being that they have almost no carbohydrates and very little fat. The leaner meats, as veal, beef and lamb, have narrow nutritive ratios while the cereals and most vegetables have in general a comparatively wide ratio. It is to be especially noted that the apparently large proportion of protein in some of the green vegetables as asparagus, lettuce, cauliflower, cabbage, etc., does not necessarily mean that their actual value as nitrogenous food is as great as the animal products with a similar nutritive ratio. Thus in asparagus a considerable amount of the protein is in such form that it cannot be used by the body for the building or repair of tissue. It is probably of no more value than the same amount of carbohydrates or a much smaller amount of fat.

In general, those food materials which have the same nutritive ratio may be substituted one for another. Thus skim-milk and eggs have practically the same nutritive ratio. There is, however, more nutriment in a pound of eggs than a pound of skim-milk because the milk has more water. The weight of skim-milk which would be equivalent to one pound or 100 pounds of eggs may be found by the following computation:

One hundred pounds of eggs would contain 11.9 pounds of protein, 100 pounds of milk would contain 3.4 pounds of protein. It would, therefore, take $(11.9 \div 3.4)$ 3.5 times as much milk, or 350 pounds, to supply as much protein as would be furnished by 100 pounds of eggs. In the same way $635 \div 170$ or 3.74 pounds of milk to supply the energy furnished by 1 pound or about 375 pounds for the energy of 100 pounds of eggs. The discrepancy in these two amounts is due to the slight difference in nutritive ratio, that of skim milk being 1.7 as compared with eggs with a ratio of 1.8. According to the proportion of protein it would take 350 pounds of milk and according to the proportion of energy 374 pounds of milk to be equivalent to the nutritive value of 100 pounds of eggs. In this case the exact nutritive value lies between these two values. Just where to place it is a matter of estimate. Such estimate may perhaps

Preliminary Report on Dietaries for Hospitals for the Insane

be better put on the basis of protein rather than of energy. We may then say that, in round numbers, it would take 360 pounds of skim-milk to be equivalent to 100 pounds of eggs. In the same way the amount of dried beans that would be equivalent to 100 pounds of average beef (side) can be calculated and also the amount of rye flour or corn meal that would be equivalent to 100 pounds of rice. Such calculations are made in grouping the food materials by nutritive equivalents as is done in Tables 2-9 beyond.

The range in variation of nutritive ratio inside of which different food materials can be properly grouped in the same class as equivalent cannot be arbitrarily stated. In general the range will be small among those materials in which the nutritive ratio is small, that is, the foods rich in protein. On the other hand if the proportions of protein are relatively small, materials with considerable differences in nutritive ratio may be put in the same group as equivalent in nutritive value. This is also true of those green vegetables in which the proportion of protein appears to be large, but which as a matter of fact actually contain much less of the actual tissue building compounds than would be indicated by the proportion of protein.

The different kinds of fresh fish, lean and fat, canned salmon, and veal, are shown by Table 1 to have relatively large proportions of protein, i. e., narrow nutritive ratios, and may be classed in the same group although different weights are required to furnish equivalent nutriment. Smoked halibut, skim-milk, eggs and chicken have a slightly wider but still very narrow nutritive ratio and may replace one another in supplying nutriment if proper weights are used. Eggs, chicken, peas and beans, and beef and lamb are likewise equivalent food materials when used in the proper amounts. The same may be said of wheat flour, onions, squash, potatoes, carrots and corn meal, and although the nutritive ratios differ more, the proportions of protein are smaller and they may be for practical purposes in the same group. Owing to the presence of an unknown amount of "unavailable protein" in some of the vegetable foods, especially the

Preliminary Report on Dietaries for Hospitals for the Insane

succulent vegetables, these latter have not been as a rule grouped with animal foods of apparently similar nutritive ratio. Fat pork and butter contain very little protein, but the amount is so small in proportion to the energy that their nutritive ratio may be considered as infinity. Sugar contains no protein. These last are, therefore, taken as equivalent food materials when used in the proper proportions.

CLASSIFICATION OF FOOD MATERIALS IN GROUPS BY NUTRITIVE EQUIVALENTS

In grouping different food materials according to their nutritive values it will be convenient to put similar materials together so far as practicable. Accordingly some of the more common food materials have been arranged in groups as follows:

1. *Beef group*: including beef and veal.—Veal is leaner than beef and may be used with fatter meat as pork or with vegetable foods to supply the protein which is lacking in the fatter meats and the vegetables. Tables 2 and 3 show how these may be replaced by other food materials or combinations without changing the nutritive value of the diet.

2. *Mutton group*: including mutton and lamb.—Mutton is as a rule fatter than beef, while the fatness of lamb depends upon the age of the animal and the method of feeding. Young lamb is hardly fatter than beef. Substitutes for mutton may be found in Table 4, and combinations of mutton with other food materials are indicated in Table 3.

3. *Pork group*: including pork and lard.—This group is made to include for convenience two sub-groups; (a) fat pork, bacon and lard, which have little or no protein, and (b) the leaner cuts of pork, such as ham, loin and shoulder, which have small proportions of protein. The nutritive ratios of the materials of both these sub-groups, and especially the first—fat pork, bacon and lard—are so wide that they can hardly replace other animal foods, except butter, unless used in combination with materials rich in protein. Combinations in which pork is used are indi-

Preliminary Report on Dietaries for Hospitals for the Insane
cated in Table 3, and substitutes for fat pork and lard are shown in Table 5.

4. *Fish group*:—The flesh of nearly all the common food fishes has a very narrow nutritive ratio, i. e., contains a very small proportion of fat as compared with the amount of protein. The proportions of fat in different kinds of fish vary, however, so that it is convenient to group together the leaner fish, such as cod, haddock, flounder, bluefish, weakfish, bass, perch, pike, pickerel, etc., as "lean fish," while the fatter fish, such as halibut, shad, mackerel, salmon, etc., are classed as "fat fish." Combinations in which fish figure are indicated in Table 3.

5. *Eggs*:—These are practically equivalent in food value, i. e., in nutritive ratio, to beef. Ways in which they can be interchanged with beef and other food materials are indicated in Table 2.

6. *Cheese*:—For substitutes see Table 2.

7. *Butter*:—Substitutes are indicated in Table 5.

8. *Milk*: including both whole and skimmed milk.—Whole milk has nearly the same nutritive ratio as mutton, while skimmed milk approaches beef in the ratio of protein to fuel ingredients. For suggested substitutes see Tables 2 and 3.

9. *Wheat flour group*: including wheat preparations, such as the wheat breakfast foods, bread, crackers, macaroni, and similar foods, in which wheat flour is the basis, have practically the same composition as the flour except so far as they contain more water. The ways in which the flours and other preparations and the breads, etc., may be substituted for each other are indicated in Table 6.

10. *Corn meal group*: including corn meal and corn preparations, buckwheat, rye and barley meals and preparations and rice. For the proportions in which these materials may be substituted for each other and for those of group 9, see Table 6.

11. *Oatmeal*:—This contains so much more protein than the other cereal foods as to give it a place by itself. It is not included in any of the tables of equivalents. It might, however, be substituted for wheat flour or other wheat preparations

Preliminary Report on Dietaries for Hospitals for the Insane
without greatly affecting the nutritive value of the diet. It is especially useful for supplying protein in diets. Oatmeal with members of the corn meal group makes combinations very similar in nutritive value to wheat flours and other materials of the wheat group.

12. *Sugars and Starches*, i. e., cornstarch, tapioca, sago, etc.

13. *Bean group*: including dried beans and peas.—These are especially valuable because of their large proportion of protein. Ways in which they may be substituted for meats and other animal foods are indicated in Tables 2 and 3. They are compared with other vegetable foods in Table 7.

14. *Potato group*: including potatoes; roots such as beets, turnips, parsnips, etc.; gourds, such as squash and pumpkin; and miscellaneous vegetables.—The proportions in which the different members of this group may replace one for the other are indicated in Table 8.

15. *Cabbage group*: including cabbage, lettuce, "greens," and other succulent and leafy vegetables.—The proportions in which the different members may replace each other are indicated in Table 7.

16. *Fruit*:—The apple is taken as typical of this group, the fresh apple representing fresh fruits, and the dried apple the dried fruits. Proportions in which the different members of the group may be substituted for each other are shown in Table 9.

It will be seen that the above classification of food materials in groups is followed in the discussion and summarizing of hospital dietaries, Table 12, and in the tentative dietaries proposed in Table 12.

TABLES OF NUTRITIVE EQUIVALENTS

By the use of the data given in Table 1 and the method of calculation above it is possible to arrange the different food materials in groups in which the indicated quantities of the different members of any one group shall be nearly equal to each other as a source of both protein and energy. Thus beef, turkey, chicken, eggs, skimmed milk and dried beans and peas with nutritive ratios ranging from 1.8 to 3.0, as indicated in Table 1

Preliminary Report on Diets for Hospitals for the Insane

beyond, are found in the same group may be grouped together. This variation of nutritive ratio is considerable, but for practical purposes of dietary computation the food materials may be taken as mutually replaceable as sources of protein and energy.

The quantities in the tables of equivalents are to be regarded simply as approximations, as round numbers expressing about the weights of one material which is equivalent in nutrients to 100 pounds of another. In fact the whole series of tables of equivalents must be considered as merely tentative. It is nothing more than a first attempt to formulate a basis for calculating the amounts of different food materials which may be used in place of one another so as to make the diet more varied, convenient or economical, without materially altering the nutritive value. Thus Table 2 beyond indicates that it is possible to substitute for 100 pounds of beef either 500 pounds of skimmed milk or 65 pounds of beans; that instead of 100 pounds of eggs 71 pounds of beef or 86 pounds of chicken can be used without any considerable change of total quantities and proportions of protein and energy. In Table 3 an attempt is made to indicate groups of mixed, or as they are here called, "double" substitutes for some of the different food materials. Thus the nutritive ratio of beef by the figures of Table 1 is 2.8 and that of ham 5.3. These two materials are not, therefore, equivalent as sources of protein and energy. The beef furnishes much more protein in proportion to the energy than does the ham. If, however, we add to the ham some material with a narrow nutritive ratio, such as veal, skim-milk, or fish, the two together may be made to furnish practically the same quantities of protein and energy as would be obtained in 100 pounds of beef. Thus 60 pounds of ham and 80 pounds of lean fish, such as cod, haddock, bluefish, or bass, may be substituted for 100 pounds of beef. Or, if a fatter fish, such as mackerel or halibut, be used, about 70 pounds with 45 pounds of ham would be required. In the same way 235 pounds of whole milk and 45 pounds of veal, or 245 pounds of whole milk and 60 pounds of codfish would be equivalent in nutritive value to 100 pounds of beef.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE 2.
Nutritive equivalents.—Beef and mutton groups with poultry, eggs, skimmed milk, and dried beans and peas.

	SUBSTITUTES.—QUANTITIES EQUIVALENT TO 100 POUNDS OF MATERIALS IN THE FIRST COLUMN.								
	Beef, side.	Lamb, side.	Turkey.	Chicken.	Eggs.	Milk, skimmed.	Beans, dried.	Peas, dried.	Cheese
ONE HUNDRED POUNDS.									
Beef, side.....	.....	100	95	120	140	500	65	60	55
Lamb, side.....	100	.....	95	120	140	500	65	60	55
Turkey.....	105	105	.....	125	145	525	68	63	60
Chicken.....	83	83	80	.....	115	415	55	50	45
Eggs.....	71	71	68	86	.....	360	46	43	40
Milk, skimmed.....	20	20	19	24	28	.....	13	12	11
Beans, dried.....	155	155	145	185	215	770	.....	90	85
Peas, dried.....	165	165	160	200	235	835	110	.....	90
Cheese.....	180	180	175	220	255	910	120	110	.....

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE 3
Nutritive equivalents — Meat, and fish groups, with milk, beans and peas

ONE HUNDRED POUNDS	DOUBLE SUBSTITUTES *—QUANTITIES EQUIVALENT TO 100 LBS. OF MATERIALS IN THE FIRST COLUMN													
	Ham and lean fish †	Ham and fat fish †	Pork side and lean fish	Pork side and fat fish	Chicken and pork side	Chicken and ham	Mutton side and veal	Ham and veal	Pork loin and veal	Pork side and veal	Milk and veal	Milk and lean fish	Milk and fat fish	Lima beans dried and veal
Beef, side.....	60	45	35	25	95	75	55	45	65	25	235	245	310	55
	80	70	135	110	15	30	35	55	35	80	45	60	45	30
Lamb, side.....	55	45	35	25	90	75	55	45	65	25	290	240	305	55
	80	70	135	110	15	30	35	55	30	80	45	60	45	30
Turkey	60	50	35	25	100	80	60	50	70	25	250	260	335	60
	85	75	145	120	15	30	35	55	35	85	50	65	50	30
Beans, dried...	90	70	50	40	145	115	90	70	100	35	360	370	480	55
	120	110	210	170	25	45	50	85	50	130	70	90	70	45
Peas, dried....	95	80	55	40	155	125	95	75	110	40	390	395	515	95
	135	115	225	190	25	50	55	90	55	140	80	100	75	45

* "Double substitutes" In this table are to be taken in the proportions and order indicated, e. g., 60 pounds of ham and 80 pounds of fresh lean fish would furnish about the same weights of actual nutritive ingredients as 100 pounds of ordinary beef, and these ingredients are in the same relative proportions as in the ham and fish together as in the beef alone. In the same way 45 pounds of ham and 75 pounds of fat fish would contain nearly the same total amounts and proportions. So likewise, 235 pounds of milk and 45 pounds of veal would be nearly equivalent in nutritive value to 100 pounds of beef. The figures under each "double substitute" thus show the weights of the two kinds of material which make the substitute, and the upper figure in each case represents the weight of the first and the lower the weight of the second.

† Under "lean fish" are included such fish as cod, haddock, bluefish, flounder, weakfish, bass, perch, pike, etc. Under "fat fish" are included salmon, mackerel, halibut, shad, etc.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE 4

Nutritive equivalents—Mutton, pork and milk

ONE HUNDRED POUNDS	SUBSTITUTES—QUANTITIES EQUIVALENT TO 100 LBS. OF MATERIALS IN THE FIRST COLUMN		
	Mutton, side	Pork, loin	Milk
Mutton, side .....	.....	100	390
Pork, loin	100	.....	390
Milk	25	25	.....

TABLE 5

Nutritive equivalents—Butter, lard, fat pork and sugar

ONE HUNDRED POUNDS	SUBSTITUTES—QUANTITIES EQUIVALENT TO 100 LBS. OF MATERIALS IN THE FIRST COLUMN			
	Butter	Lard and oil	Fat pork	Sugar
Butter .....	.....	85	98	194
Lard or oil	118	.....	115	228
Fat pork	102	87	.....	198
Sugar	52	43	51	.....

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE 6
Nutritive equivalents. Cereal products—Flours, meals, rice, breads, etc.

SUBSTITUTES—QUANTITIES EQUIVALENT TO 100 POUNDS OF MATERIALS IN THE FIRST COLUMN	
ONE HUNDRED POUNDS	
	Wheat flour
Wheat flour.....	110
Corn meal.....	90
Rye flour.....	90
Buckwheat.....	90
Barley, pearled.....	100
Rice.....	95
Wheat bread.....	85
Graham bread.....	85
Corn bread.....	80
Rye bread.....	85
	Wheat flour
	Rye flour
	Buckwheat
	Barley, pearled
	Rice
	Wheat bread
	Graham bread
	Corn bread
	Rye bread
	Wheat bread
	Graham bread
	Corn bread
	Rye bread

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE 7

Nutritive equivalents — Beans and peas, dried and green, and green vegetables

ONE HUNDRED POUNDS	SUBSTITUTES — QUANTITIES EQUIVALENT TO 100 POUNDS OF MATERIALS IN THE FIRST COLUMN											
	Beans, dried	Beans, string	Peas, dried	Peas, green	Lima beans, dried	Lima beans, green	Aspar- agus	Cab- bage	Cauli- flower	Celery	Lettuce	Spinach
Beans, dried.....	....	950	95	630	110	650	1,450	1,350	1,175	2,350	2,175	1,350
Beans, string.....	11	....	10	65	12	70	155	140	125	245	230	140
Peas, dried.....	105	1,000	....	665	115	685	1,530	1,420	1,235	2,475	2,290	1,420
Peas, green.....	16	150	15	....	18	105	230	215	185	375	345	215
Lima beans, dried.....	90	865	85	575	....	590	1,320	1,225	1,070	2,135	1,975	1,225
Lima beans, green	16	145	15	95	17	....	225	102	180	360	335	210
Asparagus	7	65	6	45	8	45	....	95	80	160	150	95
Cabbage	8	70	7	45	8	50	105	....	85	175	160	100
Cauliflower.....	9	80	8	55	9	55	125	115	....	200	185	115
Celery.....	4	40	4	27	5	28	60	55	50	....	95	55
Lettuce.....	5	45	4	29	5	30	65	60	55	110	....	60
Spinach.....	8	70	7	45	8	50	105	100	85	175	160	....

Preliminary Report on Diets for Hospitals for the Insane

TABLE 8
Nutritive equivalents—Potatoes, roots, gourds, etc.

ONE HUNDRED POUNDS	SUBSTITUTES—QUANTITIES EQUIVALENT TO 100 POUNDS OF MATERIALS IN THE FIRST COLUMN												
	Potatoes	Sweet potatoes	Beets	Parsnips	Carrots	Turnips	Onions	Leeks	Squash	Pumpkins	Green corn	Artichokes	Tomatoes
Potatoes .....	....	80	125	130	150	225	135	300	275	450	60	80	250
Sweet potatoes	125	....	155	165	190	280	170	375	345	565	75	100	315
Beets	80	65	....	105	120	180	105	240	220	360	50	65	200
Parsnips	75	65	95	....	115	175	105	240	210	345	45	60	190
Carrots	65	55	85	85	....	150	90	200	185	300	40	55	165
Turnips	45	35	55	60	65	....	60	135	120	200	30	35	110
Onions	75	60	95	95	110	165	....	225	205	335	45	60	185
Leeks	35	30	40	45	50	75	45	....	90	150	20	25	80
Squash	35	80	45	45	55	80	50	110	....	165	20	30	90
Pumpkins	25	20	80	30	35	50	30	70	60	....	15	20	55
Green corn	165	135	205	215	250	375	225	500	450	750	....	130	415
Artichokes	125	100	160	165	190	240	170	375	345	565	75	....	315
Tomatoes	40	35	50	50	60	90	55	120	110	180	25	30	....

Preliminary Report on Diets for Hospitals for the Insane

TABLE 9
Nutritive equivalents — Fruits

ONE HUNDRED POUNDS		SUBSTITUTES—QUANTITIES EQUIVALENT TO 100 POUNDS OF MATERIALS IN FIRST COLUMN								
	Apples, fresh	Apples, dried	Bananas	Apricots and peaches	Apricots, dried	Oranges	Rasp-berries	Rasp-berries, dried	Straw-berries	
Apples, fresh	....	20	65	75	13	115	75	10	105
Apples, dried	500	....	335	365	65	565	365	50	535
Bananas	150	30	....	110	20	170	110	15	160
Apricots (and peaches)	135	27	90	....	18	155	100	15	145
Apricots, dried	750	150	500	550	....	850	550	75	800
Oranges	90	18	60	65	12	....	65	9	95
Raspberries	135	27	90	100	18	155	....	15	145
Raspberries, dried	1000	200	665	735	135	1135	735	....	1065
Strawberries	95	20	65	70	13	105	70	9	....

Preliminary Report on Dietaries for Hospitals for the Insane**DIETARIES IN HOSPITALS FOR THE INSANE**

A satisfactory dietary for hospitals would be based upon a dietary standard for quantities of nutrients and energy required per person per day. From this standard could be calculated the quantities for any given number of persons, as one hundred or one thousand. These figures, with those for the composition of food materials, are the data needed for calculating daily dietaries.

The present knowledge of the actual needs of insane hospital patients of different classes is insufficient. We have tolerably well established physiological standards for people in health and of classes differing in age, sex and occupation, as above explained, but considerable accurate observation and experiment will be needed to establish reliable and satisfactory standards for people in abnormal mental and physical conditions.

With the insane, as with others, it is important to distinguish between different classes and learn the needs of each class. I think it probable that such inquiry, if properly made, will show that a large proportion of the inmates of ordinary hospitals can be well nourished with much less of total food and with much less of animal food, than is now supplied in the New York state hospitals.

In lack of exact information as to the actual needs the best that can be done is to make as accurate estimates as possible. As data for these we may use:

1. Dietary standards for people in health, taking into account the facts upon which the standards are based and what is known of the relation between age, sex, size, and especially occupation, physical and mental on the one hand, and the demands for nourishment on the other.

2. What can be found concerning the probable demands of different classes of the insane, as compared with those of people in health.

Preliminary Report on Dietaries for Hospitals for the Insane

In planning a hospital dietary the nutrition of the officers and attendants and other employees is an important factor. It seems fair to assume that they require for proper nourishment about the same proportions of nutrients as other people of the same age and sex and of corresponding occupation. A few of them are engaged in active manual labor. These are here classed as men "at moderate muscular work" or "at moderately hard manual labor." For such men, for instance, carpenters, masons, teamsters or farm hands, working regularly ten hours per day, the European standards cited in Table 11 would provide about 118 grams of protein and 3,100 calories, and the one proposed by myself, 125 grams of protein and 3,500 calories of energy per day. Some of the women have similarly active muscular exercise and would need liberal nourishment, though less than the men; the majority, however, have rather light muscular labor, their occupation being largely indoors and approaching more or less to what is called "sedentary," such as office work and the light kinds of house work. Their needs for nourishment would be correspondingly less.

Some of the patients are under treatment with more or less prospect of cure. For these, as it seems to me, especial effort should be made to insure such diet as will be both appropriate in kind and ample in amount. Just how they should be classed in their needs for nourishment and just what kinds and amounts of food would be best for each class are questions for which I know no exact answer. But it seems to me that the general rule for people in health would apply here, namely, to select the foods which experience shows to agree with the individuals, let it be made reasonably palatable and attractive, and let the amount be such as experience shows to be necessary. Among ordinary people, who are not limited in their choice of food there is a very common practice of overeating, which is believed to be, in many cases, seriously injurious to health. To what extent this is true of the insane in hospitals, it is hardly possible to say.

Preliminary Report on Dietaries for Hospitals for the Insane

What diet is best fitted for so-called agitated cases is another important question which I am unable to answer. Where there is considerable muscular activity it seems to me reasonable to assume that a corresponding amount of food would be needed. But what is the relation between metabolism and mental activity and strain, be they normal or abnormal, our present knowledge does not inform us. The best experimental results now available seem to imply that for normal mental activity, even if it be considerable, no very large amount of food is needed. There is a popular impression that mental activity involves the consumption of especially large amounts of phosphorus, and that on this account fish and whole wheat are particularly valuable foods for brain workers. But there is no evidence to show any definite relation between mental activity and phosphorus metabolism. There is no more phosphorus in fish, according to the analyses now available, than in the leaner meats. The phosphates in graham and whole wheat flour appear to be, on the whole, less completely digestible than in the ordinary, fine, wheat flours. I can see therefore no ground for using especial amounts of those materials in dietaries of agitated cases among the insane. Until more exact information regarding the needs of such patients can be obtained I see no reason for adopting any special diet other than experience may have indicated to be fitting.

Among the patients who are regarded as incurable there are, I believe, a considerable number who have more or less exercise. I should suppose that they would be well nourished by such a diet as would be fitting for people in good health and with similar activity. I understand that very few are engaged in as active muscular labor as that of a mechanic or laborer doing full work for 10 hours a day; such as is designated in the table above by the expression "moderate work." The few who have such occupation should, I suppose, have the corresponding diet. The rest would doubtless need less. I should suppose there would be a gradual gradation from this class to those who are almost en-

Preliminary Report on Dietaries for Hospitals for the Insane

tirely without activity either mental or physical. The physiological demands of this class would doubtless be very small, scarcely more than what might be called a sustenance diet, that is, the amount required for maintaining the ordinary physiological activities. If this supposition be true the actual needs of this class would be very small indeed.

TENTATIVE ESTIMATE OF PHYSIOLOGICAL DEMAND

In lack of exact information as to the demands of the several classes into which the people of a hospital might be divided I have made a tentative estimate in the manner indicated above. Of course such estimates are in large measure hypothetical. Before they can be justly laid down as settled principles for guidance they must be tested by experiment and experience. I lay great stress upon the importance of proper experimental inquiry for establishing dietary standards and upon the testing of such standards by careful practical application.

Meanwhile a tentative standard is wanted for the hospital population as a whole. This standard will be based upon certain assumptions. The following assumptions are here employed. In how far they are correct is a matter for discussion elsewhere.

1. The purpose is to supply food material sufficient for the actual physiological needs but no excess above the unavoidable waste.

2. One-half the population are men and one-half are women.

3. Taking the demand for a man at moderately hard but not severe muscular labor, for instance a carpenter, mason or farm laborer working regularly 10 hours per day, as above mentioned, at 1.0, the demands of other people as expressed in the above table of dietary standards will be approximately as follows:

Man at moderate manual labor.....	1.0
Man at lighter manual labor.....	0.9
Man with sedentary occupation or woman at light manual work	0.8

Preliminary Report on Dietaries for Hospitals for the Insane

Women with sedentary occupation.....	0.7
Man or woman without physical or mental occupation ("sustenance diet")	0.6

4. Dividing the population of the hospital into classes the physiological demand may, in lack of exact information, be tentatively assumed to be somewhat as follows:

For 100 males

One tenth, or 10 at 1.0	=	10	men at moderate muscular work
One tenth, or 10 at 0.9	=	9	" "
Four tenths, or 40 at 0.8	=	32	" "
Four tenths, or 40 at 0.7	=	28	" "
		<hr/>	
Total, 100 males	=	79	" "

For 100 females

One tenth, or 10 at 0.9	=	9	men at moderate muscular work
One tenth, or 10 at 0.8	=	8	" "
Four tenths, or 40 at 0.7	=	28	" "
Four tenths, or 40 at 0.65	=	26	" "
		<hr/>	
Total, 100 females	=	71	" "

Recapitulation

100 males	equivalent to	79	men at moderate muscular work
100 females	equivalent to	71	" "
200 persons	equivalent to	150	" "

If the physiological demand of the 200 men and women for nourishment is equal to that of 150 working men, the demand of 100 persons would be equal to that of 75 working men. This would make the average per person of the whole population equal to 75 per cent., or three-fourths that of the average working man at moderately hard manual labor. Taking the figure 1.0 on the scale for the average working man to correspond to 125 grams of protein and 3,500 calories of energy, the figure 0.75 for average of the hospital population would correspond to about 94

Preliminary Report on Dietaries for Hospitals for the Insane
grams of protein and 2,625 calories of energy per person per day.

On the whole, these quantities now seem to me decidedly large rather than small as representing the physiological demand of a hospital population. Probably a more thorough study of the subject will lead to change of these estimates. But it is worth noting that extended study of actual dietaries of well-to-do people of various classes in ordinary, active life in different parts of the United States give figures which correspond to an average of not over 97 to 104 grams of protein per man and from 78 to 83 grams per woman per day. The average energy in the same dietaries ranged from 3,300 to 3,500 calories per man and from 2,650 to 2,800 per woman. In these cases there was often a large proportion of waste, i. e., of food which was not eaten, and there is every reason to believe that the amounts of foods actually eaten often far exceeded the physiological demand. Experience in Europe, where people are well nourished with much less, confirms the belief that we, as a people, eat to excess. The excess appears to be in the fats and carbohydrates. Still stronger confirmation is found in the results of exact experiment upon the amounts of nutrients required by people of different classes and with different occupations. Strong, vigorous, active men are found by the accurate tests of the respiration apparatus and the respiration calorimeter to consume only from 2,300 to 2,700 calories of energy when not engaged in muscular work. A large share of the inmates of hospitals for the insane have very little occupation and the demand for sustenance of their bodies must be small. If food is offered them in large quantities they will often eat it, but this is no proof that so much is necessary or even best for them.

I venture the suggestion that a considerable saving might be made in some cases by giving more careful attention to the handling of the food in the kitchen and especially the serving of the food at the table. It seems to be that if the persons who dish out the food could give careful thought to the habits and needs

Preliminary Report on Dietaries for Hospitals for the Insane

of individual patients and fit the quantities to their wants there might be less overeating and less waste. I do not wish to speak dogmatically of this matter or to criticise present methods of hospital management but rather to suggest this as a way in which effort might be made toward such regulating of the food to the actual need of patients as might be advantageous both to their welfare and to the economy of administration.

**APPETITE AND REGULATION OF THE AMOUNT OF FOOD EATEN BY
THE INSANE**

It is often assumed that the appetite may be taken as a measure of the quantity of food that should properly be eaten. If this is true in some cases it certainly is not true in all. With most people the amount eaten is influenced largely by the taste of the food and the habits of the eater. Physicians and hygienists are very generally of the opinion that a large proportion of the well-to-do people in this country eat more than is necessary, and this opinion is certainly borne out by statistics of food consumption. But even assuming that people of sound mind have such good judgment and self-control and freedom from bad habits of eating that their appetites and inclinations will adjust their diet to the actual demands of their bodies irrespective of the amount and taste of the food they find in the market and on their tables, we could hardly assume that people whose judgment, acquired habits and self-control are as unreliable in other respects as is the case with many of the insane, could be depended upon to make the wisest choice in so delicate and difficult a matter as the adjustment of nutriment to physiological needs. My own limited observation has led me to think that large numbers of the insane are inclined to eat thoughtlessly. As a matter of fact, they seem to me to eat whatever is set before them, asking no questions and taking no thought as to whether or not it is more than they need, so long as hunger is satisfied and no physical discomfort is felt.

Man, like other animals, can easily dispose of much more food than is needed for his sustenance. The less is his understand-

Preliminary Report on Dietaries for Hospitals for the Insane

ing of his physical needs the more ready is he to eat unwisely. I think the question may be safely asked whether the administering of foods to some classes of insane people is not very much like the feeding of animals. If this be so, it would be only natural to expect that so long as the food is supplied to them they will eat a great deal more than is really needed. Of course account must be taken of the patients who are disinclined to eat and may be underfed unless they have special care.

The matter may be put in another way. Excessive eating is injurious to health. People of sound mind guard themselves more or less against this excess, though many fail to do so and suffer in consequence. A considerable part of the population of the hospitals for the insane cannot be expected to exercise any such self-restraint. If they are fed without regard to their needs the natural result in many cases would be excess. Such feeding is uneconomical from the standpoint of hospital administration, if not injurious to the patient himself.

If the diet were reduced or otherwise altered, very probably objections would be made, especially if the change were sudden. This, however, does not necessarily prove that the change would be harmful. The principle is illustrated by an experience in the diet of soldiers in Germany. In some parts of that country the common people are in the habit of eating large quantities of potatoes, which contain comparatively little nutriment in proportion to their weight and bulk, so that a great deal is needed to supply the necessary demands of the body. When young men who are used to this diet are brought into the army and receive the regular army ration, which is really more nutritious than the diet to which they have been accustomed, they frequently complain that they have not enough. The explanation which I have heard given by German physiologists is that they have what is popularly called "kartoffelbauch" (potato belly), that is to say, they are accustomed to have their stomachs dilated by large amounts of potatoes, and when they receive the regular army diet they do not experience this dilation

Preliminary Report on Dietaries for Hospitals for the Insane

of the stomach, and hence have not the feeling of satisfaction with the meal, although they have more real nutriment than they were previously accustomed to. They soon adapt themselves, however, to the regular diet and are satisfied with it. I cite this as an illustration of the general principle that neither the appetite nor the sense of hunger can always be accepted as a measure of the amount of nutriment actually needed. I might cite other illustrations, some from my own observation, in which people have been accustomed to a one-sided or excessive diet and have felt quite uncomfortable when the food was made more nearly normal. This feeling of discomfort, however, speedily passes away and the more natural and normal diet becomes entirely agreeable.

WASTE, I. E., FOOD NOT EATEN

Not all of the food purchased for use in families or institutions is actually eaten. There is almost of necessity more or less loss of edible material in the preparation of the food in the kitchen and in the serving and eating at the table. The amount of this loss or waste varies largely. In some cases it may be practically nothing and in other cases as much as a fifth of the total nutrients of the food purchased may be thrown away. From the economic standpoint the waste of food in American households and institutions is a serious matter and it is desirable that exact statistics should be obtained and published. In the families of 14 professional men in different parts of the United States, whose actual food consumption is shown in Table 11 beyond, it was found that, on the average, 3 per cent. of the total nutrients of the food purchased found its way into the garbage. In 14 families of mechanics the waste averaged a little over 8 per cent., while in dietary studies of college boarding clubs it was larger, and, in some cases, amounted to the throwing away of nearly one-fifth of the food brought into the house.

In the standards for daily dietaries given on page 49 and in Table 11 a small allowance is made for unavoidable waste. In

Preliminary Report on Dietaries for Hospitals for the Insane

the European dietaries it is assumed the waste will be so small as to be negligible. In the American household this is too frequently not the case.

What is the average proportion of food waste in New York hospitals I am unable to say, though the observations thus far made by myself and under my direction lead me to believe that it is sometimes very considerable. A certain amount of loss of food in this way is unavoidable in institutions where a large number of people are fed. I should suppose that in hospitals for the insane this unavoidable waste might be larger than in other hospitals and in prisons. I venture the suggestion, however, that if this subject were to receive especial attention it would in some cases at least be found possible to reduce the amounts of nutritious food thrown away in kitchen and table waste.

ACTUAL DIETARIES OF NEW YORK HOSPITALS FOR THE INSANE

In attempting to estimate the probable physiological demand of the population of New York hospitals for food it will be well to note the amounts of nutrients actually consumed at present and compare these with the amounts found in other dietaries in this country and in Europe.

To find the amounts of food and nutrients actually consumed in the New York hospitals I have had recourse to statistics kindly furnished by the State Commission in Lunacy. These are for the year from September 1, 1897, to August 31, 1898, inclusive. They show the total quantities of food materials of different kinds consumed during the year and the "average daily attendance," i. e., the average number of people, officers, employees and patients, male and female, who are nourished by the food. The figures for each hospital are recapitulated in Tables C to W of the appendix. The quantities of nutrients and energy per person per day are summarized in Table 10 herewith.

Preliminary Report on Diets for Hospitals for the Insane

TABLE 10

Quantities of nutrients and energy in total food supply per person per day, in the New York hospitals for the insane, 1897-8

HOSPITAL	Protein		Fat		Carbohydrates		Energy
	Grams	Pounds	Grams	Pounds	Grams	Pounds	Calories
Binghamton	113	.25	139	.31	439	.97	3,555
Buffalo	110	.24	142	.31	414	.92	3,470
Hudson River	116	.26	144	.32	403	.89	3,470
Long Island	111	.24	135	.30	425	.94	3,455
Manhattan	121	.27	141	.31	517	1.14	3,930
Middletown	106	.23	130	.29	342	.75	3,045
Rochester	108	.24	132	.29	379	.84	3,225
St. Lawrence	129	.28	148	.33	513	1.13	4,010
Utica	109	.24	131	.29	398	.88	3,295
Willard	110	.24	130	.29	437	.96	3,450
Average	113	.25	137	.30	427	.94	3,490

The quantities of protein, fats and carbohydrates are expressed in both grams and pounds, the former being the usual unit employed in studies of this kind, and the latter the more familiar unit.* It will be noticed that the amount of protein per person per day ranged from 106 to 129 grams and averaged 113 grams (.25 pound). The amount of fat ranged from 130 to 148 grams per person per day and averaged 137 grams (.30 pound). The smallest amount of carbohydrates found was 342 grams per person per day, the largest 517, the average being 427 grams (.94 pound). The amount of energy in the daily food ranged from 3,045 to 4,010 calories, the average being 3,490 or practically 3,500 calories. The smallest diet appears to have been that of the Middletown Hospital, the largest that at the St. Lawrence Hospital.

These values represent nutrients in the total food purchased and not the nutrients in the food eaten. As explained above the amount of waste may be quite large. In two dietary studies made in a very well conducted Hospital for the insane in

*One ounce equals 28.35 grams and one gram equals .0022 pound.

Preliminary Report on Dietaries for Hospitals for the Insane

another state, the amount of waste was about one-eighth of the food supplied. The proportion of waste in the New York hospitals during the year I have no means of learning. Observations now in progress will throw light on the quantities of waste as well as total food and food actually eaten. If the proportion of waste had been one-eighth the quantities actually eaten per person per day would have furnished in round numbers, 99 grams of protein, 120 grams of fat, 374 grams of carbohydrates, with 3,055 calories of energy.

COMPARISON OF DIETARIES OF NEW YORK HOSPITALS WITH OTHER DIETARIES AND DIETARY STANDARDS

The figures thus obtained for nutrients and energy in the New York Hospital dietaries are compared with those of other dietaries and of dietary standards in Table 11.

TABLE 11

Actual dietaries and dietary standards

[Quantities per man per day when not otherwise stated]

ACTUAL DIETARIES AND DIETARY STANDARDS	Protein	Fat	Carbo- hydrates	Fuel value
	Grams	Grams	Grams	Calories
<i>Ordinary dietaries, American</i>				
Average of 10 farmers' families ¹	97	130	467	8,515
Average of 14 mechanics' families ¹	103	150	402	3,465
Average of 14 professional men's families ¹	104	125	423	3,325
Average of 38 families above	102	136	427	3,425
<i>Ordinary dietaries, Foreign</i>				
Students, Japan	98	16	438	2,345
Young University assistant, Germany	100	100	240	2,325
Lawyer, Germany	80	125	222	2,400
Well-to-do, elderly mechanic, Germany	117	68	345	2,520
Physician, Germany	134	102	292	2,695
Physician, Denmark	135	140	250	2,885
Well-fed tailors (prisoners), England	131	39	525	3,055
Mechanics, Germany	122	34	370	3,150
Hard worked weavers (prisoners), Eng- land	151	43	622	3,570

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE 11 — (Concluded)
Actual dietaries and dietary standards

ACTUAL DIETARIES AND DIETARY STANDARDS	Protein	Fat	Carbo- hydrates	Fuel value
	Grams	Grams	Grams	Calories
<i>Ordinary dietaries, Foreign—(Cont'd)</i>				
Inmates of home for old women, Munich, Germany ²	80	49	266	1,875
Inmates of home for old men and women, Munich, Germany ²	92	45	332	2,155
German army, peace ration	114	39	480	2,800
German army, war ration	134	58	489	3,095
German army, extraordinary war ration.	192	45	678	3,985
<i>New York Hospitals for the Insane (Ten dietaries, 1897-8)</i>				
Smallest, per person per day	106	130	342	3,045
Largest, per person per day	129	148	513	4,010
Average, per person per day	113	137	427	3,490
Average, per man per day	126	152	473	3,875
Dr. Flint's dietary for New York hos- pitals, per person per day	133	158	442	3,825
Dr. Flint's dietary for New York hos- pitals, per man per day	148	175	491	4,250
<i>General dietary standards</i>				
Subsistence diet, Playfair	57	14	341	1,760
Old man with little exercise, Voit	100	68	350	2,475
Old woman with little exercise, Voit	80	50	260	1,860
Man at moderately hard muscular work, Voit	118	56	500	3,055
Man at light muscular labor, Atwater ...	112	4	4	3,000
Man without muscular labor, Atwater ...	90	4	4	2,400
Woman without muscular labor, Atwater	80	4	4	2,100
Tentative physiological standard for hos- pitals, per person per day ³	94	4	4	2,625
Same, as above, per man per day ³	104	4	4	2,920

1 Food actually eaten, i. e., not including waste.

2 Per person per day.

3 As explained on pages 73-76. Food actually eaten.

4 Fats and carbohydrates in sufficient amounts to furnish, with the protein, the requisite energy.

Preliminary Report on Dietaries for Hospitals for the Insane

The figures in this table for American families are taken from the results of a considerable number of studies by the writer and under his direction in various parts of the United States.* They show the amounts per man per day. The corresponding amounts per woman per day would be eight-tenths as much or one-fifth less. The quantities represent total food without regard to proportions eaten and wasted. The waste is often considerable.

The figures for foreign dietaries are selected from a very considerable number collated from various sources.† They may be taken as fairly representative, so far as they go, of the available results of studies of dietaries of people of the classes referred to. They represent the total food, but the allowance for waste would generally be very small except in the German army rations for time of war, when food is exposed to loss in the exigencies of marching and fighting.

The dietary standards are the same as quoted above, and make allowance for only the unavoidable waste which would be very small. The tentative physiological standard for New York hospitals for the insane is that given on page 82 and makes no allowance for waste.

The figures in this table bring out several things of interest. Before discussing them, however, attention should be called to three points. The first is the difference between quantities per man per day and those per person per day. The calculations for the American dietaries as well as the dietary standards prepared by myself assume that on the average a woman needs for nourishment and actually eats 0.8 as much as a man. This assumption is based upon the results of considerable observation in Europe and in the United States, although of course it may not be entirely correct. The estimates of food consumed in the actual dietaries, American and foreign, are given in quantities

* See Reports of Storrs Experiment Station for 1891-97, sundry bulletins of the Office of Experiment Stations of the United States Department of Agriculture on dietary studies and article on "Results of Dietary Studies" by the writer and Mr. A. P. Bryant in the Yearbook of the United States Department of Agriculture for 1898.

† For details see Bulletin 21 of the Office of Experiment Stations, United States Department of Agriculture on "Investigations on the Chemistry and Economy of Food," pages 141-198.

Preliminary Report on Dietaries for Hospitals for the Insane
per man per day unless otherwise stated. The corresponding quantities of nutrients and energy per woman per day would be 0.8 as much. In dietaries of men and women together in equal numbers it would be 0.9 as much. This difference is brought out in the figures for the New York hospitals for the insane where the average per person per day is 113 grams of protein and 3,490 calories, while per man per day the figure for protein would be raised to 126 and that for energy to 3,875.

The second matter for special consideration has to do with the proportions of protein. The ratio of protein to fuel ingredients is much larger in the European than in the American dietaries. The general dietary standards proposed by myself provide for ratios of protein to fuel ingredients, i. e., nutritive ratios intermediate between those of the European dietaries and dietary standards on the one hand and the ordinary American dietaries on the other. I have been led to believe that on the whole our ordinary American dietaries are one-sided, that they contain excessive amounts of fats and carbohydrates and that they would be physiologically better if these fuel ingredients were reduced and the proportions of protein somewhat increased. The fundamental principle here is that a large amount of muscular, if not mental activity seems to be best favored by considerable portions of protein. To what extent the fats and carbohydrates can take the place of the protein for this special purpose is not yet known. My own judgment, however, is that for people with little muscular activity small quantities of protein will suffice. That is to say in dietaries of hospitals for the insane, where people with little muscular activity make so large a proportion of the population it seems to me probable that food with relatively small amounts of protein would suffice. To put the statement in another way I am inclined to think that the nutritive ratios of the dietaries of the New York hospitals may be not far from proportioned to the actual needs of the population and that the change required to bring the dietaries nearer to a true physiological standard would consist in a reduction of the total

Preliminary Report on Dietaries for Hospitals for the Insane

amount of food rather than a change of the proportion of protein to fuel ingredients. In this discussion, therefore, I assume that the present nutritive ratio of the food of the New York hospitals is not far out of the way and that the question of change is one of total quantity.

The third point has to do with the waste of food. The figures for the New York hospitals, as already stated, represent the total food supplied. This includes an undetermined amount of table and kitchen waste. The amounts of waste in the dietaries of the American families cited in the table averaged not far from 5 per cent. of the whole. In boarding houses the proportions of waste were found to be larger. In the foreign dietaries, especially in Germany, it would probably be much smaller as the habits of eating, like the other habits there prevalent, so far as carefulness and economy are concerned, are much less wasteful than in the United States. We might perhaps assume at a venture that the food waste in the New York hospitals would represent 10 per cent (0.1) of the whole. If such were the case the amounts actually eaten would be 0.9 of those given in the figures in the table for the New York hospital dietaries.

Remembering that the figures per person per day are likewise 0.9 of those per man per day the quantities actually eaten per man per day would be the same as the quantities in the table per person per day. That is to say if we assume that 10 per cent of the total food supplied in the New York hospitals is thrown away and 90 per cent actually eaten and that no waste is provided for in the European dietaries and in the dietary standards of the table, the figures per person per day given for the New York hospitals would correspond with those per man per day in the European dietaries and in dietary standards.

Let us then compare the New York hospital dietaries with some of the other dietaries of well-nourished people, cited in Table 11, basing the comparison upon the protein and fuel values, i. e., the calories of energy in the food. The figures which we have to bear in mind for the averages of the hospital die-

Preliminary Report on Dietaries for Hospitals for the Insane
taries are 3,875 calories of energy in the total food supplied per man per day. If we allow 10 per cent. for waste there will be 3,490 calories in the food actually eaten per man per day. This average is for the whole population reckoned as men. For the actual population, consisting of men and women in about equal numbers, the amount would be nine-tenths of 3,875, that is to say, 3,490 in the total food supplied per person per day and 3,150 in the food eaten per person per day, if 10 per cent. is thrown away. To put it in another way, the total food furnished 3,490 calories per person per day, taking the average of men and women, but it is computed that the average man would have 3,875 and the average woman 3,100, so that the mean per person would be 3,490.

The dietaries proposed by Dr. Flint are calculated from estimates of a daily ration for hospitals, which were furnished by that distinguished physiologist to the State Commission in Lunacy and explained in the circular "Form 39—Third Edition" published by the Commission. The schedules for rations are stated by the author to be calculated "according to the physiological requirements of one person." Two such rations are given; one being a "daily ration" with quantities in ounces, the other being for "supplies for 100 persons for 30 days" with quantities in pounds. We have calculated the quantities of nutrients and energy in both these and find practically the same amounts per person per day. The quantities are regarded by the author as "more than ample," and reports from several superintendents published in the circular imply that they have been found to be in excess of the actual needs.

We may compare these figures first with those of the American families. Of these there were 38, 10 of farmers and 14 each of mechanics and professional men. All were reasonably well-to-do and considered themselves well fed. Practically all of the members of the families were in good health and were engaged in active operations. The average fuel value of the food actually eaten was 3,425 calories per man per day. It

Preliminary Report on Dietaries for Hospitals for the Insane seems probable that they ate on the average more than they needed, and in many instances more than was best for their health. Yet the hospital population, with much smaller physical requirements, had one-eighth more in the total food supply and somewhat more in the food actually eaten, even if 10 per cent. was thrown away.

The professional men in Germany, university professor, lawyer and physicians, were young or of middle age, with active occupation, well-to-do and well fed. They had from 2,325 to 2,880 and averaged just about 2,500 calories per day in their total food, of which, doubtless, nearly the whole was eaten. The well-to-do elderly mechanic in Germany had the same amount, the other German mechanics, with more active muscular work, averaged 3,150, while the well-fed tailors in England had 3,085 calories. All of these people, then, were in active life, well nourished and had only from two-thirds to four-fifths as much food as was supplied for the hospital population, who really needed very much less.

The inmates of the homes for old people in Munich, who were fairly well nourished, had food with fuel value corresponding to about 2,400 calories per man per day. Their physiological demand would probably be a little less than the average hospital population. The latter had 60 per cent. more food as estimated by the fuel values. If none of the food of the Munich asylums and 10 per cent. of that of the New York hospitals was thrown away, the American insane patients and their attendants ate 45 per cent. more than the inmates of the German asylum.

The rations of the German soldiers are specially interesting in this connection. In the management of the German army great care is given to the diet. It was the maxim of Frederick the Great that to build up an army one must begin with the stomach. Ever since his time it has been an axiom that if soldiers are to march well and fight well they must be well fed. The rations here quoted are representative. The one for the army

Preliminary Report on Dietaries for Hospitals for the Insane
on a peace footing, when the men are engaged in drill and other exercises during the day, provides 2,800 calories. For time of war, when there is hard marching and hard fighting to be done, the amount is increased to 3,100 calories. The extraordinary ration is for occasions of forced marching and severe fighting, when the physical and mental strain are severe, and a sudden attack of the enemy may sometimes rob the soldier of his meal, so that an extra large amount of food must be supplied. As a bountiful supply to meet this large demand for nourishment, the German soldier receives a ration which is computed to furnish 3,985 calories of energy, 100 more than the state of New York appears to be in the way of supplying to the men in its insane asylums, most of whom have little or no work, and require relatively small amounts of food.

So much has been said already of the dietary standards that further comparison of those given in the table with the New York hospital dietaries is hardly called for in this place. It may be noted, however, that the tentative physiological standard for hospitals per day, suggested by myself, is intended to be very liberal in its fuel value.

I ought perhaps to refer once more to the proportions of protein, which in the American dietaries and in the tentative standard suggested by myself, are small compared with those in the European dietaries and in the dietary standards, both the foreign and my own. It may be that I am in error in not suggesting an increased proportion of protein, i. e., a narrower nutritive ratio, for the hospital dietaries, but I do not yet feel warranted in proposing any important alteration from the present practice of the New York hospitals in this respect. It is, however, possible, indeed it now appears to me not improbable, that future experiment and experience may lead to such a change.

A very small percentage of the total hospital population are engaged in such active employment as the carpenter, mason, blacksmith or teamster who is using his muscles actively for

Preliminary Report on Dietaries for Hospitals for the Insane
ten hours a day, and for whom the dietary standard proposed by myself would supply 3,500 calories per day. Of those who are employed in actual muscular work the majority would doubtless come nearer in this respect to the German mechanic at moderate work for whom Voit's standard provides 3,050 calories, or the man at light muscular work for whom my own standard furnishes 3,000 calories.

Leaving out a few exceptional cases the rest of the workers among the men would hardly need more food than the German men who are engaged in active professional work, and were well nourished with a diet which furnishes 2,500 calories a day. The rest of the males, the non-workers, would generally need still less.

I am told, however, that in a considerable number of cases the metabolism seems to be quite abnormal and that the patients thus affected eat large quantities of food. Of the actual demands of the patients of this class, I do not feel competent to speak, as I am not familiar with any conclusive experimental inquiry bearing upon the subject. In considering it, however, one is reminded of the view which is coming to be held regarding the brain as a regulator of metabolism. One of the leading physiologists of our time lately gave expression to this view in private conversation, saying: "We are gradually learning that the chief function of the brain is to regulate metabolism, and that thought is a process which occupies much less of its activity." If this be true it is easy to see how some forms of mental disease might impair this function of the brain, so that metabolism would become abnormal and the person might eat large quantities of food without the corresponding nutritive effect. Whether patients of this class would be sufficiently nourished by normal amounts of food is a question to be answered by experiment.

On the other hand there is a large class of patients whose bodily and mental activity is reduced to a minimum. The nourishment which they need is probably limited essentially to the

Preliminary Report on Dietaries for Hospitals for the Insane
demands for carrying on the internal physiological work of the body, viz.: respiration, circulation and digestion. They require very little more than a sustenance ration.

Of course for patients who are ill, and for many exceptional cases special diet is needed, but the amounts of special food materials required for this purpose would not materially affect the average for the whole hospital population. Taking all the circumstances into calculation as far as we know, it would seem that 3,000 calories per day in the food actually eaten would be very liberal for the whole hospital population. It would also seem that less than 10 per cent. of the total nutriment of the food ought ordinarily to be thrown away in the kitchen and table wastes. And while I wish to speak cautiously of this matter until more accurate information is obtained from actual observation and experiment, it would seem to me that with proper arrangements and with careful handling of the food in the kitchen and careful serving at the table, with pains to avoid giving to patients more food than they individually need, the waste might be kept much below 10 per cent.

ESTIMATES FOR POSSIBLE REDUCTIONS IN QUANTITIES AND COSTS OF FOOD

Assuming that the present food supply is unnecessarily large the question arises: What reductions may be made without detriment to the hospital population? I do not feel competent to answer this question categorically without considerable more information than is now available regarding (1) the physiological demands of the different classes of patients, (2) the actual and the unavoidable amounts of waste, and (3) the possibilities of substituting cheaper for costlier food materials. To learn the physiological demand a series of careful observations and experiments will be needed. The amount of waste at present can be found by weighings and analyses of the waste materials. Whether and how much this waste can be reduced must be learned by experience. The possibilities of economizing in the kinds of food appear to be numerous but they will be best learned

Preliminary Report on Dietaries for Hospitals for the Insane

by actual test. Meanwhile some calculations of possible changes and reductions in the food supply will be interesting. For these we may consider: (1) the present food supply as indicated by the statistics already cited for the year 1897-8, (2) the estimated physiological demand, for which indications may be found in the statistics above given, and (3) the amounts of waste for which we have no exact data and can employ only arbitrary assumptions.

I have ventured to suggest* a tentative physiological standard for the hospital population. This standard is based upon general experiment and experience. I trust that observations and experiments already begun in New York hospitals may bring some of the more exact information now so much needed regarding the actual demands of different classes of the insane. When this shall be obtained it will probably call for revision of the tentative standard. Meanwhile, as was explained in detail above, this standard seems decidedly liberal. It calls for 94 grams of protein and 2,625 calories of energy in the food actually eaten per person per day. The corresponding quantities per man per day would be 104 grams of protein and 2,920 calories of energy in the food eaten.

To the amount eaten must be added an allowance for waste. Whatever figures are here assumed to cover this item must be provisional. In private families we have found the actual amounts in kitchen and table waste to be from nearly nothing to as high as 8 per cent. In boarding houses it has reached 10 per cent or more. We may perhaps assume either 10 per cent as a possible average at present, or 5 per cent as a proportion to which it might be reduced.

**PROTEIN AND ENERGY PER MAN PER DAY—COSTS FOR WHOLE
HOSPITAL SYSTEM PER YEAR**

It will add to the interest of the calculations if they are put on a pecuniary basis. I am informed that the annual cost of food supplied to the New York hospitals is not far from \$1,200,000 per year and have taken this figure for the estimates.

* See page 82

Preliminary Report on Dietaries for Hospitals for the Insane

In the following calculations the average food supply of the hospitals, as detailed in Tables C-W of the appendix and summarized in Tables 10 and 11, is taken as the starting point. Estimates are made for reducing the total amount of food by one-tenth, one-seventh, and one-fifth, or 10, 14.3 and 20 per cent. of the whole, with allowances of 10 and 5 per cent for waste.

Reducing the total food supply by one-tenth and allowing 10 per cent waste the amounts per man per day will be:

	Protein	Energy
Present supply	126 grams	3,875 calories
Reduction, 10 per cent.	13 “	385 “
Supply as reduced	113 “	3,490 “
Allow for waste 10 per cent.	11 “	350 “
Amount actually eaten	102 “	3,140 “

Translated into dollars, the annual costs will be :

Cost of present supply	\$1,200,000
Proposed reduction of 10 per cent.	120,000
Cost as reduced	1,080,000
Cost of 10 per cent. waste	108,000

If, however, we make a reduction of one-seventh or 14.3 per cent. of the total food, still allowing 10 per cent. waste, the quantities will be:

	Protein	Energy
Present supply	126 grams	3,875 calories
Reduction, one-seventh	18 “	555 “
Supply as reduced	108 “	3,320 “
Allow 10 per cent. waste	11 “	330 “
Amount actually eaten	97 “	2,990 “

On this basis the actual costs are :

Present supply	\$1,200,000
Reduction, one-seventh, say	171,000
Cost as reduced	1,029,000
Cost of 10 per cent. waste	102,900

Preliminary Report on Dietaries for Hospitals for the Insane

If the reduction in food supply be 10 per cent. and the waste be only 5 per cent., or one-twentieth of the whole supply, the amounts become :

	Protein	Energy
Present supply	126 grams	3,875 calories
Reduction, 10 per cent.	13 "	385 "
Supply as reduced	113 "	3,490 "
Allow for waste 5 per cent.	6 "	175 "
Amount actually eaten	107 "	3,315 "

The corresponding money values will be :

Cost of present supply	\$1,200,000
Reduction, 10 per cent.	120,000
Cost as reduced	1,080,000
Cost of 5 per cent. waste	54,000

Making the reduction one-seventh (14.3 per cent.), of the whole food, the waste remaining 5 per cent., the quantities become :

	Protein	Energy
Present supply	126 grams	3,875 calories
Reduction, one-seventh	18 "	555 "
Supply as reduced	108 "	3,320 "
Allow 5 per cent. waste	5 "	165 "
Amount actually eaten	103 "	3,155 "

On this basis the annual costs are :

Present supply	\$1,200,000
Reduction, one-seventh, say	171,000
Reduced cost	1,029,000
Cost of 5 per cent. waste	51,000

With only 5 per cent. allowance for waste, a reduction of one-fifth, or 20 per cent. of the total food supply, would make amounts as follows :

	Protein	Energy
Present supply	126 grams	3,875 calories
Reduction, 20 per cent	25 "	775 "
Supply as reduced	101 "	3,100 "
Allow for waste 5 per cent	5 "	155 "
Amount actually eaten	96 "	2,945 "

Preliminary Report on Dietaries for Hospitals for the Insane

The corresponding money values will be :

Cost of present supply	\$1,200,000
Reduction, 20 per cent	240,000
Cost as reduced	960,000
Cost of 5 per cent. waste	48,000

SUGGESTIONS FOR CHANGES IN HOSPITAL DIETARIES

It is evident that there are two special difficulties in the way of exact estimates desired for the hospital dietary, namely, the uncertainties as to the physiological standard, and the allowance to be made for waste. At the same time it is reasonably certain that the present amount of food ought to be materially reduced. Doubtless the best way will be to commence with a rather small reduction and to let the change be made gradually so as to avoid danger of either sudden disturbance of the eating habits or of making the quantities too small for proper nourishment. In making the reduction my judgment is that the best plan will be to start with the present average dietary and deduct a certain amount, say perhaps one-seventh or one-tenth of the whole. I am inclined to think it would be best to make the principal part of the reduction in fats and carbohydrates so that in the reduced ration the proportion of protein will be somewhat larger than at present. I propose, however, at the outset the more conservative plan of scaling down all of the nutritive ingredients in the same proportion, leaving the change of proportions to be decided by future experience. And finally, I propose, that the kinds of materials remain the same as now used, but that provision be made for considerable interchange of different food materials, so that one may be used in the place of another as convenience and economy indicate.

To this end the different food materials may be divided into groups. A convenient grouping will be that on page 59 above. As the starting point we take the food materials used in the year 1897-8, and divide the whole quantities used for the year into the sixteen groups and then calculate the average amount of

Preliminary Report on Dietaries for Hospitals for the Insane

each actually used for a given number of rations, say for 1 person 100 days or for 100 persons 1 day. These quantities are shown in Table 12 in the columns under the title "Actual rations of New York hospitals." The next step will be to reduce the several groups and hence the total quantities of food materials and of nutrients and energy by one-tenth, leaving the ratio of the weights of the different food materials to each other the same as in the actual ration. In like manner a reduction of one-seventh of food materials may be made, leaving the ratio of the different food materials to one another very nearly the same as before. The reduced rations as thus calculated are also shown in Table 12.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE 12
Average actual ration per 100 persons and per person per day in ten New York Hospitals, 1897-8, and tentative rations, with reductions of one-tenth and one-seventh the total nutrients

Number of Group	FOOD MATERIAL	AVERAGE ACTUAL RATION		TENTATIVE RATION WITH NUTRIENTS REDUCED ONE-TENTH		TENTATIVE RATION WITH NUTRIENTS REDUCED ONE-SEVENTH	
		Quantities per 100 persons one day	Quantities per person per day	Quantities per 100 persons one day	Quantities per person per day	Quantities per 100 persons one day	Quantities per person per day
		Pounds	Ounces	Pounds	Ounces	Pounds	Ounces
1	Beef and veal.....	41	6.5	43	7	36	5.75
2	Mutton and lamb	6.5	1		1.25	6.25	1
3	Pork	9	1.5	8	1.75	6.25	1
4	Fish.....	11.5	2	10.5	.75	6.25	1
5	Eggs	6.5	1	5.5	.25	1.50	.25
6	Cheese.....	2.5	.5	2	1.5	7.75	1.25
7	Butter	10	15	9	14	75	12
8	Milk	95	10	85.5	9	56.25	9
9	Wheat flour, etc.....	63	1	56.5	1	12.5	2
10	Corn meal, etc.....	6	.5	6	.5	3.25	.5
11	Oat meal.....	3	.5	2.5	2.5	15.5	2.5
12	Sugar and starch.....	3	3	16	.5	6.25	1
13	Dried beans and peas.....	18		3			

Preliminary Report on Dietaries for Hospitals for the Insane

14	Potatoes, etc	88	14	79	12.5	75	12
15	Cabbage, etc.....	25	4	22.5	3.5	18.75	3
16a	Fresh fruit	9	1.5	8	1.25	6.25	1
16b	Dried fruit.....	3	.5	2.5	.5	3.25	.5
	Total protein in grams.....	11,200	112	10,100	101	9,700	97
	Total energy in calories.....	346,500	3,465	310,000	3,100	300,000	3,000

Preliminary Report on Dietaries for Hospitals for the Insane

It will be noticed that this average ration is computed to furnish very nearly the same amounts of nutrients and energy as those for the average of the New York hospital dietaries per person per day in Table 11. Considering that the composition of wheat flour was taken as representing the average composition of all the members of the wheat group, and that of corn meal as representing the corn meal group, that of potatoes as representing the composition of all tubers, roots and gourds used, and that of cabbage as representing the composition of all fresh, succulent vegetables; while the fresh and dried apples are taken as representing all the fruits it is not surprising that there should be a slight disagreement in the average results as compared with the averages given in Table 11. This close agreement indicates either that each typical material represents quite closely the average composition of all the materials in the respective groups, or that it formed the principal item in each group.

TENTATIVE RATIONS PROPOSED

As just explained, two rations are tentatively suggested in Table 12. In both of these the kinds of food materials are the same as in the actual dietaries now in use. The quantities are, however, reduced, in one case by one-tenth and in the other case by one-seventh, that is to say, so as to furnish respectively about nine-tenths and six-sevenths the amounts of nutrients found in the actual dietaries.

The first of the two rations, that with one-tenth reduction, provides 105 grams of protein and 3,100 calories of energy per person per day. These correspond to 117 grams of protein and 3,445 calories of energy per man per day, which are nearly the same amounts as those given in the calculations just made on page 96. If the amount wasted be 5 per cent., there will remain 111 grams of protein and 3,270 calories of energy per man per day. These amounts considerably exceed those given in the tentative physiological standard suggested by myself (see Table 11). If the waste is 10 per cent. the amount eaten will supply 105 grams of protein and 3,100 calories of energy per man per

Preliminary Report on Dietaries for Hospitals for the Insane
day. This exceeds the tentative physiological standard just mentioned, which calls for 104 grams of protein and 2,920 calories of energy in the food per man per day.

The second of the two rations makes a reduction of one-seventh. It is estimated to furnish 108 grams of protein and 3,335 calories of energy per man per day. Allowing 10 per cent. waste, the protein will be 97 grams and the energy 3,000 calories per man per day. The protein is thus a little less and the energy about the same, as the tentative physiological standard calls for. But if the waste is only 5 per cent. the amounts become 103 grams of protein and 3,170 calories of energy. This makes about the supply of protein and considerably more energy than in the tentative standard.

USE OF PROPOSED SCHEDULES FOR HOSPITAL RATIONS

The method of using these figures would be as follows: Let us assume that the ration with a reduction of one-tenth is to be followed. The schedule is to be elastic and a considerable liberty of choice is to be allowed in substituting different classes of food materials for each other. The substitutions can be made on the basis of the nutritive equivalents in Tables 2-9. As a practical illustration, suppose a dietary is to be made up for 500 persons for one week. The figures here are for 100 persons for one day. Multiplying them by 35 will give the quantities required. It is desirable now to make changes in the kinds of food material without materially altering the nutritive values. For instance, suppose that corn meal is to be used in the place of rice. We find by the figures in Table 6 that 95 pounds of corn meal correspond to 100 pounds of rice. The 100 pounds of rice may therefore be replaced by 95 of corn meal. So likewise in Table 8 from the figures it appears that 100 pounds of turnips are equivalent to 45 pounds of potatoes and may be used in their stead. It is desirable not only to substitute materials of the same group for each other, but also to replace those of one group by those of another. Ways in which this last can be done are shown in some of the tables. Thus Tables 2

Preliminary Report on Dietaries for Hospitals for the Insane
and 3 indicate ways in which vegetable foods can be used in place of meats without material change in the amounts of nutriment.

Later I hope to be able to suggest more general plans not only for substituting members of different groups for each other, but also for substituting members of one group for those of another so as to give still greater flexibility to the schedules.

I desire particularly to insist that these schedules, so far from being final, are to be considered only as provisional and tentative. This statement applies not only to the estimates for the standard rations, but also to those for food substitutes. It is not easy to prepare such schedules as will be of the greatest practical value without the experience which is to be had only in the hospital storeroom, kitchen and dining room. These schedules are drawn up and the suggestions are made in the hope that they may come to the attention of those who have the administration of hospital dietaries in hand; and that I may, with my assistants, have more opportunity than we have thus far enjoyed to consult with such officers, and to spend more time in the hospitals, and thus find how the schedules may be best adapted to the actual needs of hospital administration.

By thus making use of experience to modify the schedules and at the same time give them greater flexibility, I trust it may be possible to adapt them to the demands of different hospitals and classes of patients on the one hand, and, on the other, to the conditions of locality, season, and market and farm supply as well as cost of food materials.

My idea is that the rations proposed and the quantities of substitutes should be regarded as general guides rather than as schedules to be followed to the exact pound. In so far as the substitutions will involve change in the relative proportions of protein or of fuel ingredients I think the effort should be made to increase the quantity of protein. That is to say, oatmeal and beans can be better substituted for wheat flour than wheat flour for oatmeal and beans. Wheat flour can be better substituted

Preliminary Report on Dietaries for Hospitals for the Insane
for rice, corn meal and hominy than vice versa. If the sugar and starch, which have no protein, are to be increased there should be a corresponding increase of nitrogenous materials, as lean meat or fish or eggs, or oatmeal or beans or peas, with diminution of foods with the wider nutritive ratio.

If it is thought best to make a reduction of one-seventh instead of one-tenth the corresponding figures for the standard ration from Table 12 should be followed.

As already said, my judgment is that in hospitals where hitherto large amounts of food have been given, the reduction and other changes would best be gradual. I should hope it might be found possible to reduce the amounts of waste so that a total reduction of one-seventh if not of one-fifth might ultimately be practicable. I also hope that it may be found practicable to devise minor plans for increasing the cheaper nitrogenous foods like oatmeal, beans and peas and introducing the use of skim milk in some places, so as to increase the protein in the ration while diminishing the fuel ingredients. These, however, are matters to be decided later.

With regard to the whole subject of hospital rations there are several things to be considered which I have not thought it proper to discuss in detail here, although they seem to me of very decided importance.

One has to do with beverages and condiments. The use of these is a matter somewhat removed from the nutritive values of ordinary food materials.

Another is the matter of special or "extra" dietaries which are naturally prescribed at the reviews of the medical officers and could hardly be included in schedules such as those here given.

The third has to do with the peculiarities of the different classes of people of the same hospital and especially with the populations of different hospitals. Much attention must necessarily be paid to the eating habits of the persons whose dietaries are to be provided.

Preliminary Report on Dietaries for Hospitals for the Insane

RECOMMENDATIONS

The recommendations thus made can be summarized in few words. On pages 59, 60 and 61 and in Tables 2-9 the different kinds of food materials used in the New York hospitals are divided into groups. In Table 12 two tentative rations are proposed for hospital dietaries. Both have the kinds of food materials and the proportions of each group in the whole food supply as found in the present hospital dietaries. In each a reduction of the total present amount is called for. This reduction in the first of the two rations is one-tenth and in the second one-seventh of the whole.

I suggest the trial of the first ration, using the quantities which are given for 100 persons for one day or one person for 100 days as a basis for calculating the dietary of the hospital population. Considerable flexibility of choice of food materials is provided by the estimates for food substitutes in Tables 2-9. This schedule assumes that one-tenth of the total food materials supplied to the hospital will be left uneaten in the kitchen and table wastes. The nine-tenths, which are assumed to be actually eaten, are computed to supply rather more of actual nutriment than is called for in a tentative physiological standard which I have ventured to suggest.

If the waste is, or can be made, 5 per cent. instead of 10 per cent. of the total food supply, I think it probable that such a ration as the second, which makes a reduction of one-seventh from the present amounts of food supplied, would be sufficient. Indeed I am inclined to think that a still greater reduction in total amount of food could be made if the waste were reduced to a minimum and such changes were made in the kinds of food materials as would provide a somewhat larger proportion of protein. But at present it seems to me safer to use the first ration with a reduction of only one-tenth.

It is also my judgment that any change which is to be made should be gradual and that due care should be taken to avoid

Preliminary Report on Dietaries for Hospitals for the Insane

any sudden alterations in either the amounts or kinds of food as might be seriously unacceptable. This is a matter in which the practical experience and wise judgment of hospital superintendents and physicians must be depended upon to decide the exact plans of action.

I also recommend that the observations and experiments which have already been undertaken in some of the hospitals be continued and increased in the hope that we may gradually get more definite information as to the exact physiological demands of patients of different classes and the methods of practical dietetic management which are needed for estimating the proper physiological standards and constructing such hospital rations as will be permanently most advantageous.

Meanwhile if it should be the judgment of the Commission that the proposed reduction of one-tenth of the total food supply would be too large at the outset, it would be very easy to make the reduction one-twentieth, or 5 per cent. The mathematical calculations for this will be very simple. I shall be glad to make such calculations and further estimates or explanations as the Commission may desire.

APPENDIX

The following tables of statistics are referred to in the body of the preceding report.

TABLE A*The percentage composition of food materials*

The composition of our ordinary food materials is shown in Table A, which is taken from a much larger compilation lately prepared by the writer and Mr. A. P. Bryant.*

* Bulletin 28 (Revised edit.) of the Office of Experiment Stations, United States Department of Agriculture, on "The Chemical Composition of American Food Materials."

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE A
Chemical composition of food materials

MATERIAL	Refuse	Water	Protein	Fat	Carbo- hydrates	Ash	Fuel value per pound
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Calories
Beef, fresh:							
Chuck and shoulder.....	15.2	57.9	16.6	10.1	.....	.8	863
Flank.....	10.2	60.3	18.9	21	.....	.9	735
Loin.....	13.3	60.6	18.5	20.2	.....	.7	1,240
Plate.....	16.5	54.4	16.5	29.1	.....	1	1,115
Ribs.....	20.8	45.3	13.8	24.4	.....	.9	1,190
Round.....	7.2	60.7	20.3	13.6	.....	.8	1,040
Shank, hind.....	59.9	31.3	9.6	5.3	.....	.7	1,535
Fore quarters.....	18.7	49.1	14.5	17.5	.....	.9	1,285
Hind quarters.....	15.7	50.4	15.4	18.3	.....	.9	1,450
Sides.....	17.4	59.7	18.1	22	.....	.7	1,155
Kidney.....	19.9	78.7	16.6	4.8	.4	1.2	950
Liver.....	7.3	71.2	20.7	4.5	1.5	1	895
Beef, corned.....	8.4	53.6	15.6	26.2	.....	.4	875
Beef, corned, canned, as purchased.....	.....	49.2	14.3	23.8	.....	.7	405
		53.1	28.2	15.2	.....	1.2	1,235
					.....	1.6	1,010
					.....	1.3	1,250
					.....	4.9	1,080
					.....	4.6	1,265
					.....	4.2	1,040
					.....	.....	1,520
					.....	.....	335
					.....	.....	605
					.....	.....	555
					.....	.....	1,335
					.....	.....	1,270
					.....	.....	1,165

Preliminary Report on Diets for Hospitals for the Insane

Beef, dried.....	{ edible portion	54.3	30	6.5	.4	9.1	840
Beef, tripe, as purchased.....	{ as purchased	53.7	26.4	6.9	-----	8.9	780
Gelatine, as purchased.....	.....	74.6	16.8	8.5	-----	.5	670
Veal, fresh:	.....	13.6	91.4	.1	-----	2.1	1,705
Sides.....	{ edible portion	71.3	20.2	8.1	-----	1	715
Lamb and Mutton:	{ as purchased	55.2	15.6	6.3	-----	.8	555
Lamb sides.....	{ edible portion	58.2	17.6	23.1	-----	1.1	1,300
Mutton sides.....	{ as purchased	47	14.1	18.7	-----	.8	1,055
Pork:	{ edible portion	53.6	16.2	29.8	-----	.8	1,580
Bacon.....	{ as purchased	43.3	13	24	-----	.7	1,265
Ham, fresh.....	{ edible portion	18.8	9.9	67.4	-----	4.4	3,030
Ham, smoked.....	{ as purchased	17.4	9.1	62.2	-----	4.1	2,795
Pork, salt, fat, as purchased.....	{ edible portion	53.9	15.3	28.9	-----	.8	1,505
Shoulder, fresh.....	{ as purchased	48	13.5	25.9	-----	.8	1,345
Shoulder, smoked.....	{ edible portion	40.3	16.3	38.8	-----	4.8	1,940
Sides, fresh.....	{ as purchased	34.8	14.2	33.4	-----	4.2	1,675
Sausage:	{ edible portion	7.9	1.9	86.2	-----	3.9	3,670
Bologna.....	{ as purchased	51.2	13.3	34.2	-----	.8	1,680
Frankfort, as purchased.....	{ edible portion	44.9	12	29.8	-----	.7	1,480
Pork, as purchased.....	{ as purchased	45	15.9	32.5	-----	6.7	1,665
Vienna, as purchased.....	{ as purchased	36.8	11	26.6	-----	5.5	1,365
Poultry:	{ edible portion	34.4	9.1	55.3	-----	.5	2,505
Chickens and fowls.....	{ as purchased	30.4	8	49.1	-----	.5	2,215
Turkeys.....	{ edible portion	60	18.7	17.6	.3	3.7	1,085
Ducks.....	{ as purchased	55.2	18.2	19.7	-----	3.8	1,170
	{ edible portion	57.2	19.6	18.6	1.1	3.4	1,170
	{ as purchased	39.8	13	44.2	1.1	2.2	2,125
	{ edible portion	43.9	26	22.1	1.6	4.4	1,485
	{ as purchased	63.7	19.3	16.3	-----	1	1,045
	{ edible portion	47.1	13.7	12.3	-----	.7	775
	{ as purchased	55.5	21.1	22.9	-----	1	1,380
	{ edible portion	42.4	16.1	18.4	-----	.8	1,075
	{ as purchased	46.7	16.3	36.2	-----	.8	1,830
	{ edible portion	38.5	13.4	29.8	-----	.7	1,505

Preliminary Report on Diets for Hospitals for the Insane

TABLE A—(Continued)

MATERIAL	Refuse	Water	Protein	Fat	Carbo- hydrates	Ash	Fuel value	
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	per pound	Calories
ANIMAL FOOD—(Continued)								
Fish, etc., fresh:								
Blue, entrails removed.....	.....	78.5	19.4	1.2	.....	1.3		410
{ edible portion.....	.....	40.3	10.0	.6	.....	.7		210
{ as purchased.....	48.6	82.6	16.5	.4	.....	1.2		325
Cod, dressed.....	29.9	58.5	11.1	.2	.....	.8		215
{ edible portion.....	.....	84.2	14.2	.6	.....	1.3		290
{ as purchased.....	57.0	35.8	6.4	.3	.....	.6		130
Flounders, entrails removed..	.....	81.7	17.2	.3	.....	1.2		335
{ edible portion.....	.....	40.0	8.4	.2	.....	.6		165
{ as purchased.....	51.0	83.1	15.4	.7	.....	1.0		315
Haddock, entrails removed..	.....	39.5	7.3	.3	.....	.5		150
{ edible portion.....	52.5	73.4	18.7	7.1	.....	1.2		645
{ as purchased.....	.....	43.7	11.6	3.5	.....	.7		365
Mackerel, entrails removed..	40.7	79.3	18.7	.8	.....	1.2		380
{ edible portion.....	.....	50.7	12.8	.7	.....	.9		265
{ as purchased.....	35.1	76.0	21.6	.8	.....	1.5		435
Perch, yellow, dressed.....	.....	54.3	15.4	.6	.....	1.1		310
{ edible portion.....	28.5	70.6	18.8	9.5	.....	1.3		750
{ as purchased.....	.....	36.2	9.4	4.8	.....	.7		380
Pollacks, dressed.....	50.1	79	17.8	2.4	.....	1.2		430
{ edible portion.....	.....	38	8.6	1.1	.....	.6		205
{ as purchased.....	51.9	69.8	22.9	6.5	.....	1.6		700
Shad, whole.....	.....	32.5	10.6	3	.....	.7		325
{ edible portion.....	53.5	75.9	18.1	4.3	.....	1.7		520
{ as purchased.....	.....	44.6	10.5	2.5	.....	1		300
Average fish, fresh.....	42							
Fish, preserved:								
Cod, salt.....	.....	53.5	25.4	.3	.....	24.7		410
{ edible portion.....	.....	40.2	19	.4	.....	18.5		315
{ as purchased.....	24.9	49.4	20.7	15	.....	15		1,020
Halibut, smoked.....	.....	46	19.3	14	.....	13.9		950
{ edible portion.....	.....				.....
{ as purchased.....	7				.....		

Preliminary Report on Diets for Hospitals for the Insane

Herring	{ edible portion.....	.....	36.9	15.8	.....	13.2	1,355
Mackorel, salt, entrails re-	{ as purchased.....	44.4	20.5	8.8	.....	7.4	1,750
moved	{ edible portion.....	.....	21.1	22.6	.....	13.2	1,345
Salmon, salt	{ as purchased.....	22.9	16.3	17.4	.....	10.2	1,035
	{ edible portion.....	.....	20.7	15	.....	15	1,020
	{ as purchased.....	7	19.3	14	.....	13.9	1,950
Salmon, cauned	{ edible portion.....	.....	21.8	12.1	.....	2.6	915
	{ as purchased.....	14.2	19.5	7.5	.....	2	680
Shellfish:							
Clams, long	{ edible portion.....	.....	8.6	1	2	2.6	240
	{ as purchased.....	41.9	5	.6	1.1	1.5	140
Clams, round	{ edible portion.....	.....	6.5	.4	4.2	2.7	215
	{ as purchased.....	67.5	2.1	.1	1.4	.9	70
Oysters, solids, as purchased	.....	.....	6	1.3	3.3	1.1	230
Eggs and dairy products, etc:							
Eggs, bens	{ edible portion.....	.....	13.4	14.5	.....	1	720
	{ as purchased.....	11.2	11.9	9.3	.....	.9	635
Butter, as purchased	.....	.....	1	85	.....	3	3,603
Cheese, full cream, as purchased	.....	.....	25.9	33.7	2.4	3.8	1,950
Cottolene, as purchased	.....	.....	.....	100	.....	.....	4,220
Condensed milk sweetened, as purchased	.....	.....	8.8	8.3	54.1	1.9	1,520
Condensed milk unsweetened, as purchased	.....	.....	9.6	9.3	11.2	1.7	780
Cream, as purchased	.....	.....	2.5	18.5	4.5	.5	910
Milk, whole, as purchased	.....	.....	3.3	4	5	.7	325
Milk, skim, as purchased	.....	.....	3.4	.3	5.1	.7	170
Cereals:							
Barley, pearled, as purchased	.....	.....	8.5	1.1	77.8	1.1	1,650
Buckwheat, flour, as purchased	.....	.....	6.4	1.2	77.9	.9	1,620
Corn, flour, as purchased	.....	.....	7.1	1.3	78.4	.6	1,645
Corn, meal, as purchased	.....	.....	9.2	1.9	75.4	1	1,655
Corn, hominy, as purchased	.....	.....	8.3	.6	79	.3	1,650
Oats, meal, as purchased	.....	.....	16.1	7.2	67.5	1.9	1,860
Oats, rolled, as purchased	.....	.....	16.7	7.3	66.2	2.1	1,850
Popcorn, as purchased	.....	.....	11.2	5.2	71.4	1.4	1,755
Rice, as purchased	.....	.....	8	.3	79	.4	1,630
Rye, flour, as purchased	.....	.....	6.8	.9	78.7	.7	1,630

VEGETABLE FOOD

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE A — (Continued)

MATERIAL		Refuse	Water	Protein	Fat	Carbo- hydrates	Ash	Fuel value per pound
		Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Calories
Wheat:								
Flour, as purchased.....		.....	12	11.4	1	75.1	.5	1,650
Entire wheat, as purchased.....		.....	11.4	13.8	1.9	71.9	1	1,675
Graham flour, as purchased.....		.....	11.3	13.3	2.2	71.4	1.8	1,670
Farina, as purchased.....		.....	10.9	11	1.4	76.3	.4	1,685
Rollod, cracked, etc., as purchased.....		.....	10.1	11.1	1.7	75.5	1.6	1,685
Parched, as purchased.....		.....	8.6	13.6	.2.4	74.5	.9	1,740
Avg. all wheat breakfast foods, as purchased.....		.....	9.6	12.1	1.8	75.2	1.3	1,700
Crackers, Boston, as purchased.....		.....	7.5	11	8.5	71.1	1.9	1,885
Crackers, soda, as purchased.....		.....	5.9	9.8	9.1	73.1	2.1	1,925
Macaroni, as purchased.....		.....	10.3	13.4	.9	74.1	1.3	1,665
Noodles, as purchased.....		.....	10.7	11.7	1	75.6	1	1,665
Spagetti, as purchased.....		.....	10.3	13.4	.9	74.1	1.3	1,665
Starches, sugars and oils:								
Chocolates, as purchased.....		.....	5.9	12.9	48.7	30.3	2.2	2,860
Cocoa, as purchased.....		.....	4.6	21.6	28.9	37.7	7.2	2,320
Corn starch, as purchasl.....		.....	.....	.....	.....	90	.....	1,675
Sugar, granulated, as purchased.....		.....	.....	.....	.....	100	.....	1,860
Sugar, powdered, as purchased.....		.....	.....	.....	.....	100	.....	1,860
Molasses, as purchased.....		.....	25.1	2.4	.....	69.3	3.2	1,290
Cane sirup, as purchased.....		.....	.....	.....	.....	70	.....	1,300
Maple sirup, as purchased.....		.....	.....	.....	.....	71.4	.....	1,330
Candy, as purchased.....		.....	.....	.....	.....	96	.....	1,785
Cottonseed oil, as purchased.....		.....	.....	.....	100	.....	.....	4,220
Vegetables:								
Asparagus, as purchased.....		.....	94	1.8	.2	3.3	.7	105
Beans, butter.....		.....	58.9	9.4	.6	29.1	2	740
Beans, dried, as purchased.....		50	29.4	4.7	.3	14.6	1	370
Beans, string.....		.....	12.6	22.5	1.8	59.6	3.5	1,605
.....		.....	89.2	2.3	.3	7.4	.8	195
.....		7	83	2.1	.3	6.9	.7	180

Preliminary Report on Dieteries for Hospitals for the Insane

Beans, string, canned, as purchased.....	.....	93.7	1.1	.1	3.8	1.3	95
Beans, lima, dried, as purchased.....	.....	10.4	18.1	1.5	65.9	4.1	1,625
Beans, lima, fresh.....	55	68.5	7.1	.7	22	1.7	570
Beets .....	.....	30.8	3.2	.3	9.9	.8	255
Beets .....	.....	87.5	1.6	.1	9.7	1.1	215
Beet greens, as purchased.....	20	70	1.3	.1	7.7	.9	170
Beet greens, as purchased.....	.....	81.4	2.4	1	10.6	4.6	285
Cabbage.....	.....	91.5	1.6	.3	5.6	1	145
Cabbage.....	15	77.7	1.4	.2	4.8	.9	125
Carrots .....	.....	88.2	1.1	.4	9.3	1	210
Carrots	20	70.6	.9	.2	7.4	.9	160
Cauliflower, edible portion.....	.....	92.3	1.8	.5	4.7	.7	140
Celery .....	.....	94.5	1.1	.1	3.3	1	85
Celery	20	75.6	.9	.1	2.6	.8	70
Corn, green .....	.....	75.4	3.1	1.1	19.7	.7	470
Corn, green	61	29.4	1.2	.4	7.7	.3	180
Corn, canned, as purchased .....	.....	76.1	2.8	1.2	19	.9	455
Cucumbers .....	.....	95.4	.8	.2	3.1	.5	80
Cucumbers	15	81.1	.7	.2	2.6	.4	70
Eggplant, as purchased .....	.....	92.9	1.2	.3	5.1	.5	130
Kale, as purchased.....	.....	81.4	2.4	1	10.6	4.6	285
Kohlrabi, as purchased .....	.....	91.1	2	1	5.5	1.3	145
Leeks .....	.....	91.8	1.2	.5	5.8	.7	150
Leeks	15	78	1	.4	5	.6	130
Lettuce .....	.....	94.7	1.2	.3	2.9	.9	90
Lettuce	15	80.5	1	.2	2.5	.8	75
Okra.....	.....	90.2	1.6	.2	7.4	.6	175
Okra.....	12.5	78.9	1.4	.2	6.5	.5	155
Onions .....	.....	87.6	1.6	.3	9.9	.6	225
Onions	10	78.9	1.4	.3	8.9	.5	205
Onions, green .....	.....	87.1	1	.1	11.2	.6	230
Onions, green	51	42.6	.5	.1	5.5	.3	115
Parasnips .....	.....	83	1.6	.5	13.5	1.4	300
Parasnips	20	66.4	1.3	.4	10.8	1.1	240
Parsley, as purchased.....	.....	86.7	4.2	.6	6.3	2.2	220
Peas, green.....	.....	74.6	7	.5	16.9	1	465
Peas, green.....	45	40.8	3.6	.2	9.8	.6	255
P'ees, canned, as purchased.....	.....	85.3	3.6	.2	9.8	1.1	255
Peas, split, as purchased .....	.....	9.5	24.6	1	62	2.9	1,655

Preliminary Report on Diets for Hospitals for the Insane

Blackberries, as purchased .....	.....	86.3	1.3	1	10.9	.5	270
Apricots, canned, as purchased .....	.....	81.4	.9	.....	17.3	.4	340
Bananas .....	.....	75.3	1.3	.6	22	.8	460
Cherries, canned, as purchased	35	48.9	.8	.4	14.3	.6	300
Citron, dried, as purchased .....	.....	77.2	1.1	.1	21.1	.5	415
Cocoanut, shredded, as purchased .....	.....	19	.5	1.5	78.1	.9	1,525
Cranberries, as purchased .....	.....	3.5	6.3	57.4	31.5	1.3	3,125
Currants, dried, Zante, as purchased .....	.....	88.9	.4	.6	9.9	.2	215
Dates, dried .....	.....	17.2	2.4	1.7	74.2	4.5	1,495
Grapes	10	15.4	2.1	2.8	78.4	1.3	1,615
Jelly, as purchased	25	13.8	1.9	2.5	70.6	1.2	1,450
Lemons .....	.....	77.4	1.3	1.6	19.2	.5	450
Muskmelons .....	.....	58	1	1.2	14.4	.4	335
Watermelons .....	.....	38.4	1.2	.....	59.8	.6	1,135
Nuts, mixed, edible portion .....	.....	89.3	1	.7	8.5	.5	205
Oranges	30	62.5	.7	.5	5.9	.4	145
Peanuts	50	89.5	.6	.....	9.3	.6	185
Peaches .....	.....	44.8	.3	.....	4.6	.3	90
Peaches, canned, as purchased .....	.....	92.4	.4	.2	6.7	.3	140
Peaches, dried, as purchased	59.4	37.5	.2	.1	2.7	.1	60
Pears .....	.....	3.6	18.8	59.2	16.7	1.7	3,160
Pineapples, edible portion .....	.....	86.9	.8	.2	11.6	.5	240
Pineapples, canned, as purchased	27	63.4	.6	.1	8.5	.4	170
Plums .....	.....	9.2	25.8	38.6	24.4	2	2,560
Prunes, dried	24.5	6.9	19.5	29.1	18.5	1.5	1,935
Raisins, dried	6	85	1.1	.....	13.4	.5	270
.....	.....	79.9	1	.....	12.6	.5	255
.....	.....	88.1	.7	.1	10.8	.3	220
.....	.....	29.4	4.7	1	62.5	2.4	1,290
.....	.....	84.4	.6	.5	14.1	.4	295
.....	10	76	.5	.4	12.7	.4	260
.....	.....	89.3	.4	.3	9.7	.3	200
.....	.....	61.8	.4	.7	36.4	.7	715
.....	.....	78.4	1	.....	20.1	.5	395
.....	5	74.5	.9	.....	19.1	.5	370
.....	.....	22.3	2.1	.....	73.3	2.3	1,400
.....	15	19	1.8	.....	62.2	2	1,190
.....	.....	14.6	2.6	3.3	76.1	3.4	1,605
.....	10	13.1	2.3	3	68.5	3.1	1,445

Preliminary Report on Diets for Hospitals for the Insane

TABLE A—(Concluded)

MATERIAL	Refuse	Water	Protein	Fat	Carbo- hydrates	Ash	Fuel value per pound
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Calories
VEGETABLE FOOD—(Continued)							
Fruits and Nuts:							
Raspberries, as purchased	.....	85.8	1	.....	12.6	.6	255
Raspberries, dried, as purchased	.....	8.1	7.3	1.8	80.2	2.6	1,705
Strawberries } edible portion	.....	90.4	1	.6	7.4	.6	180
Strawberries } as purchased	5	85.9	.9	.6	7	.6	175
Strawberries, canned, as purchased	.....	40	.8	2.1	56.4	.7	1,150
Whortleberries, as purchased	.....	82.4	.7	3	13.5	.4	390

Preliminary Report on Dietaries for Hospitals for the Insane

THE PECUNIARY ECONOMY OF FOODS

Table B herewith is taken from an article by the writer in the Yearbook of the United States Department of Agriculture for 1894. It shows the amounts of nutrients contained in the weights of different food materials which could be bought at the ordinary retail prices current at the time.

TABLE B

Nutrients obtained for ten cents in different foods at ordinary prices

FOOD MATERIAL AS PURCHASED.	Prices per pound	TEN CENTS WILL BUY—				
		Total food material	NUTRIENTS			Fuel value
			Protein	Fat	Carbo-hydrates	
ANIMAL FOODS						
Beef:	Cents	Pounds	Pound	Pound	Pound	Calories
Neck	4	2.50	0.36	0.28	.....	1,825
Do	6	1.67	.24	.19	.....	1,220
Do	8	1.25	.18	.14	.....	910
Chuck	8	1.25	.19	.19	.....	1,175
Do	10	1	.15	.15	.....	940
Do	14	.71	.11	.11	.....	695
Shoulder	6	1.67	.27	.18	.....	1,270
Do	9	1.11	.18	.12	.....	845
Do	12	.83	.14	.09	.....	630
Rib	10	1	.13	.21	.....	1,140
Do	12	.83	.11	.18	.....	945
Do	16	.63	.08	.13	.....	720
Sirloin	12	.83	.14	.16	.....	915
Do	15	.67	.11	.13	.....	735
Do	18	.55	.09	.10	.....	605
Do	20	.50	.08	.09	.....	550
Round	10	1	.18	.11	.....	780
Do	12	.83	.15	.09	.....	645
Do	15	.67	.12	.07	.....	525
Liver	5	2	.43	.11	0.04	1,330
Do	8	1.25	.27	.07	.02	830
Dried and smoked	15	.67	.21	.05	.....	595
Do	20	.50	.16	.03	.....	445
Do	25	.40	.13	.03	.....	355
Canned corned	10	1	.27	.16	.....	1,170
Do	12	.83	.22	.13	.....	970
Do	16	.63	.17	.10	.....	735
Veal:						
Shoulder	8	1.25	.21	.11	.....	845
Do	10	1	.17	.09	.....	675
Do	14	.71	.12	.06	.....	480

Preliminary Report on Diets for Hospitals for the Insane

TABLE B—(Continued)

FOOD MATERIAL AS PURCHASED	Prices per pound	TEN CENTS WILL BUY				
		Total food material	NUTRIENTS			Calorie value
			Protein	Fat	Carbohydrates	
ANIMAL FOODS—(Continued)	Cents	Pounds	Pound	Pound	Pound	Calories
Veal—(Continued)						
Loin (chops)	15	.67	.11	.06	.....	445
Do	20	.50	.08	.05	.....	335
Leg (cutlet)	15	.67	.05	.02	.....	155
Do	20	.50	.04	.01	.....	120
Mutton:						
Shoulder	5	2	.26	.37	.....	2,050
Do	7	1.43	.19	.26	.....	1,465
Shoulder ..	10	1	.13	.19	.....	1,025
Loin (chops)	8	1.25	.16	.39	.....	1,935
Do	12	.83	.11	.26	.....	1,285
Do	16	.63	.08	.19	.....	975
Leg	8	1.25	.19	.19	.....	1,140
Do	12	.83	.12	.12	.....	755
Do	16	.63	.09	.09	.....	575
Pork:						
Sparerib	10	1	.14	.25	.....	1,300
Do	12	.83	.12	.20	.....	1,080
Do	14	.71	.10	.17	.....	925
Smoked ham	12	.83	.06	.31	.....	1,430
Do	16	.63	.04	.24	.....	1,090
Do	20	.50	.04	.19	.....	860
Smoked shoulder	8	1.25	.16	.41	.....	2,030
Do	10	1	.13	.34	.....	1,625
Do	14	.71	.09	.23	.....	1,150
Salt pork, fat	10	1	.04	.69	.....	2,995
Do	14	.71	.03	.49	.....	2,125
Pork sausage	8	1.25	.15	.02	.02	2,430
Do	10	1	.12	.40	.01	1,945
Do	12	.83	.10	.34	.01	1,615
Bologna sausage	8	1.25	.24	.22	.....	1,350
Do	10	1	.19	.17	.....	1,080
Fish:						
Fresh cod, dressed	6	1.67	.18	.....	.....	340
Do	8	1.22	.13	.....	.....	255
Do	12	.83	.09	.....	.....	170
Fresh mackerel, dressed	12	.83	.09	.03	.....	300
Do	15	.67	.08	.02	.....	240
Do	18	.55	.06	.02	.....	200
Bluefish, dressed	8	1.25	.12	.01	.....	255
Do	12	.83	.08	.01	.....	170
Do	16	.63	.06	.....	.....	130
Halibut steaks	15	.67	.10	.03	.....	310
Do	18	.55	.08	.02	.....	255
Salmon	25	.40	.06	.04	.....	270
Do	50	.20	.03	.02	.....	135
Salt mackerel	8	1.25	.18	.19	.....	1,135
Do	12	.83	.12	.15	.....	755
Salt cod, dry	6	1.67	.28	.01	.....	525
Do	8	1.25	.20	.01	.....	395

Preliminary Report on Diets for Hospitals for the Insane

TABLE B—(Continued)

FOOD MATERIALS AS PURCHASED	Prices per pound.	TEN CENTS WILL BUY—				
		Total food material	NUTRIENTS.			Fuel value
			Protein	Fat	Carbohydrates	
ANIMAL FOODS—(Cont'd)						
Fish—(Continued)	Cents	Pounds	Pound	Pound	Pound	Calories
Boned salt cod	9	1.11	.25	.....	.....	470
Do	10	1	.22	.....	.....	425
Oysters :						
30 cents a quart	15	.67	.04	.01	.03	175
40 cents a quart	20	.50	.03	.01	.02	130
50 cents a quart	25	.40	.03	.01	.01	105
Eggs :						
15 cents a dozen	10	1	.13	.12	.....	720
20 cents a dozen	13½	.75	.09	.09	.....	540
25 cents a dozen	16½	.60	.08	.07	.....	430
30 cents a dozen	20	.50	.07	.06	.....	360
Milk, whole :						
4 cents a quart	2	5	.18	.20	.24	1,625
6 cents a quart	3	3.33	.12	.13	.16	1,080
8 cents a quart	4	2.50	.09	.10	.12	815
Skim, 3 cents a quart ..	1½	6.67	.23	.03	.34	1,200
Butter	16	.63	.....	.54	.....	2,275
Do	24	.42	.....	.36	.....	1,520
Do	32	.31	.....	.26	.....	940
Cheese :						
Whole milk	12	.83	.23	.30	.01	1,665
Do	16	.63	.16	.23	.01	1,265
Skim milk	10	1	.31	.17	.16	1,345
VEGETABLE FOODS.						
Wheat flour	2	5	.55	.06	3.74	8,225
Do	2½	4	.44	.04	2.99	6,580
Do	3	3.33	.33	.03	2.49	5,480
Corn meal	2	5	.46	.18	3.56	8,250
Do	3	3.33	.31	.12	2.37	5,495
Oatmeal	3	3.33	.50	.24	2.27	6,160
Do	4	2.50	.38	.18	1.71	4,625
Do	5	2	.30	.14	1.36	3,700
Rice	5	2	.15	.01	1.59	3,260
Do	7	1.43	.11	.01	1.14	2,330
Wheat bread	4	2.50	.26	.03	1.38	3,160
Do	5	2	.22	.02	1.11	2,530
Do	6	1.67	.17	.02	.92	2,110
Do	8	1.25	.13	.01	.69	1,580
Boston crackers	5	2	.21	.20	1.37	3,790
Do	6	1.67	.18	.17	1.15	3,160
Milk crackers	6	1.67	.16	.22	1.16	3,355
Do	9	1.11	.10	.15	.77	2,230
Oyster crackers	6	1.67	.19	.08	1.29	3,095
Do	9	1.11	.13	.05	.86	2,060
Corn starch and tapioca ...	8	1.25	.....	.....	1.23	2,275
Do	10	1	.....	.....	.98	1,820
Sugar, granulated	4	2.50	.....	.....	2.50	4,650
Do	5	2	.....	.....	2	3,720
Do	6	1.67	.....	.....	1.67	3,105

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE B—(Concluded)

FOOD MATERIALS AS PURCHASED	Prices per pound	TEN CENTS WILL BUY—				
		Total food material	NUTRIENTS			Fuel value
			Protein	Fat	Carbo-hydrates	
VEGETABLE FOODS—(Cont'd)						
Potatoes:	Cents	Pounds	Pound	Pound	Pounds	Calories
45 cents a bushel.....	$\frac{4}{5}$	13.33	.24	.01	2.03	4,265
60 cents a bushel.....	1	10	.18	.01	1.52	3,200
75 cents a bushel.....	$1\frac{1}{4}$	8	.14	.01	1.22	2,560
90 cents a bushel.....	$1\frac{1}{2}$	6.67	.12	.01	1.01	2,135
Sweet potatoes:						
90 cents a bushel	$1\frac{1}{2}$	6.67	.09	.02	1.52	3,070
\$1.20 a bushel	2	5	.06	.02	1.14	2,300
\$1.50 a bushel	$2\frac{1}{2}$	4	.05	.01	.91	1,840
Turnips	$1\frac{1}{4}$	8	.07	.01	.46	1,040
Beans	3	3.33	.74	.06	1.98	5,345
Do	4	2.50	.56	.05	1.49	4,010
Do	5	2	.45	.04	1.19	3,210

STATISTICS OF DIETARIES OF NEW YORK HOSPITALS FOR THE INSANE, 1897-8

The statistics of the food consumed by the various state hospitals for the insane in New York during the year from September 1, 1897, to August 31, 1898, have been kindly furnished by the Commission in Lunacy for computations of the nutritive values. By use of figures representing the average percentage composition of the different kinds of food materials the total amounts of nutrients contained in the food furnished the different hospitals has been calculated, and the results of these computations are shown in the following tables. The values employed for the percentage composition of the food materials are generally the same as those given in Table A above. In some cases slightly different percentages were used, the reason being that Table A represents later averages than those used in the calculation of the dietaries as explained on page 103 above. These values have, however, been changed but slightly and do

Preliminary Report on Dietaries for Hospitals for the Insane
not make any considerable difference in the computed results. In each dietary the average daily attendance of officers and employees and patients, male and female, for the year is stated. The total number of this hospital population multiplied by the number of days for which the food was furnished, namely, 365, gives the equivalent number of persons nourished for one day.

The final results of the computations are given in the tables of hospital dietaries beyond. The food materials are arranged in the same order as indicated in Table A. These tables show the percentage composition assumed for the different food materials, the total weight in pounds of materials indicated, as having been used during the year, the corresponding weights in kilograms, and the weight of protein, fat and carbohydrates in kilograms computed as being furnished by the different materials. In all these computations the gram or kilogram is employed rather than the pound, according to customary usage.*

The quantities of many of the food materials used in families and institutions are commonly stated in other units than the pound. Thus flour, oatmeal, sugar, crackers, etc., may be purchased by the barrel; potatoes, turnips, beets and the like are commonly sold by the bushel; while oranges, pineapples and berries, when purchased in quantities, are sold by the box or crate. The weight of contents of a barrel of flour, a bushel of vegetables and a crate of fruit was, as a rule, estimated by the stewards of the different hospitals. In some cases such estimates were made by the persons in charge of these calculations. While there may have been some variations between the actual and the assumed weights of the different units employed, it is not probable that any important error in the final results of the dietaries would be introduced in this manner.

The second table in each dietary study shows the weight of different classes of food materials consumed per person per day and the corresponding weights of nutrients. These quantities

*One pound is equal to .454 kilograms and conversely, one kilogram is equal to 2.2 pounds. One kilogram is equal to 1000 grams.

Preliminary Report on Dietaries for Hospitals for the Insane

are given in grams. They are obtained from the corresponding totals in the previous tables by dividing these totals by the equivalent number of persons for one day and expressing the result in grams instead of kilograms. Thus in Table C, which shows the amounts of different kinds of food materials used at the Binghamton Hospital and the nutrients furnished by them, there were 300,308 pounds or 136,339 kilograms of beef, veal and mutton used by 1,679 people in one year, or the equivalent of 612,835 people one day. The amounts of protein, fat and carbohydrates estimated to have been furnished by this beef are 20,118.8, 25,372.5 and 11.1 kilograms respectively. The corresponding values for one person one day are shown in Table D. These are obtained by dividing the total amount of beef and the nutrients therein, as given in Table C, by 612,835, and amount to 223 grams of total beef, veal and mutton furnishing 33 grams of protein and 41 grams of fat per person per day. The table also shows the fuel value of the foods. At the right of this table on the same line are shown the corresponding percentages of the total food materials and nutrients.

It must be remembered that there is no estimate of the amounts of waste, so that the results show simply the average amounts of nutrients and energy, per person per day, in the total amount of food materials supplied.

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Binghamton Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE C

Average daily attendance. Binghamton State Hospital

	Men	Women	Total
Officers, employees and others.....	184	156	340
Patients:	610	729	1,339
Total	794	885	1,679

Equivalent number of persons for one day, 612,835.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE C — (Continued)—Binghamton State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD	Per cent	Per cent	Per cent			Kilograms	Kilograms	Kilograms
Beef:								
Sides	14.8	18.1	.....	115,680	52,519	7,772.8	9,505.6	.....
Fore quarters.....	14.5	17.5	.....	132,927	60,349	8,750.5	10,560.9	.....
Pressed	23.6	27.7	.....	16,296	7,398	1,745.9	2,049.2	.....
Livers and kidneys	20.5	4.7	1.3	1,875	851	174.5	39.9	11.1
Total .....	.....	.....	.....	266,778	121,117	18,443.7	22,155.6	11.1
Veal, sides.....	15.6	6.3	.....	5,430	2,465	384.5	155.3	.....
Lamb and mutton sides	13	24	.....	28,100	12,757	1,658.4	3,061.6	.....
Pork:								
Sides	8.3	54.8	.....	30,388	13,796	1,145	7,560.2	.....
Bacon	9.3	62.5	.....	1,271	577	53.6	360.6	.....
Ham, smoked.....	13.6	33.4	.....	3,580	1,625	221	542.7	.....
Shoulder, smoked	13	26.6	.....	7,036	3,195	415.3	849.8	.....
Lard.....	.....	100	.....	11,146	5,060	.....	5,060	.....
Total .....	.....	.....	.....	53,421	24,253	1,834.9	14,373.3	.....

Preliminary Report on Diets for Hospitals for the Insane

Poultry:									
Chicken	13.7	12.3	.....	3,185	1,445	197.9	177.7	.....
Turkey	16.1	18.4	.....	3,008	1,366	219.9	251.3	.....
Total	.....	.....	.....	6,193	2,811	417.8	429	.....
Fish									
Fish	10.2	2.3	.....	60,730	27,571	2,812.2	634.1	.....
Eggs	13.1	9.8	.....	44,373	20,145	2,638.9	1,974.2	.....
Butter	1	85	.....	64,495	29,280	292.8	24,888	.....
Cheese	26.1	33.5	2.3	10,063	4,569	1,192.5	1,530.6	105.1	
Milk	3.3	4	5	642,006	291,471	9,618.5	11,658.8	14,573.6	
Total animal food	.....	.....	.....	1,181,589	536,439	39,294.2	80,860.5	14,689.8	
VEGETABLE FOOD.									
Cereals:									
Barley, pearled	9.3	1	77.6	1,100	499	46.4	49.9	387.3	
Corn, flour	9.3	2.4	75.1	9,800	4,449	413.7	106.7	3,341.2	
Cornmeal, gran.	9.3	2.4	75.1	9,600	4,358	405.2	104.6	3,272.8	
Hominy	8.5	.7	79.1	3,200	1,453	123.5	10.1	1,149.3	
Farina	11	1.2	75.9	1,500	681	74.9	8.1	516.9	
Rice	7.8	.4	79.2	9,600	4,358	339.9	17.4	3,451.5	
Rolled oats	16.8	7.2	66.3	9,360	4,249	713.8	305.9	2,817.2	
Wheat flour	11.2	1.1	75.2	362,600	164,620	18,437.4	1,810.8	123,794.2	
Crushed wheat	12	1.6	74.6	2,800	1,271	152.5	20.3	948.1	
Whole wheat	13.8	1.9	72	3,000	1,362	187.9	25.8	980.6	
Crackers, soda	9.8	9.5	73.3	11,794	5,354	524.7	508.6	3,924.5	
Macaroni	11.8	1.6	73.1	3,147	1,429	168.6	22.8	1,044.6	
Total	.....	.....	.....	427,501	194,083	21,588.5	2,991	145,628.2	

TABLE C—Binghamton State Hospital. Total food materials and nutrients, etc.—(Continued)

Preliminary Report on Dietaries for Hospitals for the Insane									
KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED					
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS			Carbohydrates
						Protein	Fat	Carbohydrates	
	Per cent	Per cent	Per cent	Pounds	Kilograms	Kilograms	Kilograms	Kilograms	Kilograms
VEGETABLE FOOD—(Cont'd)									
Starches, sugars and oils:									
Corn starch.....	.....	.....	93.8	791	359	.....	.....	.....	336.7
Chocolate	12.9	48.7	30.3	270	123	15.8	59.9	.....	37.3
Sago.....	.....	.....	93.8	500	227	.....	.....	.....	212.9
Sugar.....	.....	.....	100	73,164	33,216	.....	.....	.....	33,216
Syrup.....	.....	.....	70	41,701	18,932	.....	.....	.....	13,252.4
Salad oil .....	.....	100	.....	150	68	.....	68	.....	.....
Tapioca .....	.4	.3	87.5	1,400	636	2.5	1.9	.....	556.5
Total .....	.....	.....	.....	117,976	53,561	18.3	129.8	.....	47,611.8
Vegetables:									
Beans, dried.....	22.5	1.8	59.3	17,520	7,954	1,789.6	143.1	.....	4,716.8
Beans, string	2.3	.3	8.9	9,000	4,086	93.9	12.2	.....	363.7
Asparagus	1.8	.2	3.3	880	399	7.2	.8	.....	13.1
Beans and peas, canned .	3.6	.2	9.8	4,416	2,004	72.1	4	.....	196.4
Beets	1.6	.1	10.3	17,500	7,945	127.1	8	.....	818.3
Cabbage	1.4	.2	4.8	68,208	30,966	433.5	62	.....	1,486.3
Carrots	1.1	.3	9.2	34,300	15,572	171.3	46.7	.....	1,432.6
Cauliflower	1.8	.5	4.7	383	176	3.2	.8	.....	8.3
Celery	1	.1	3	9,717	4,411	44.1	4.4	.....	132.3

Preliminary Report on Dieteries for Hospitals for the Insane

Corn	1.4	.4	8.6	1,935	878	12.3	3.5	75.5
Corn, canned	2.8	1.2	19.3	6,480	2,942	82.3	35.3	567.8
Cucumbers .....	.8	.2	3.1	6,908	3,136	25	6.3	97.2
Leeks .....	.7	.3	3.5	256	116	.8	.3	4.1
Lettuce	1.0	.2	2.5	5,013	2,276	22.7	4.5	56.9
Onions	1.5	.4	9.2	31,450	14,278	214.2	57.1	1,313.5
Onions, green .....	.5	.1	5.5	5,646	2,563	12.8	2.6	140.9
Parsnips	1.3	.4	10.8	41,525	18,852	245	75.5	2,036
Peas	3.6	2	9.8	13,265	6,022	216.8	12	590.1
Peas, split	24.6	1	62	1,000	454	111.7	4.5	281.5
Pickles (cucumbers) ..	.6	.3	3.4	8,400	3,814	22.9	11.4	129.7
Potatoes ..	1.7	.1	14.8	488,544	221,799	3,770.6	221.8	32,826.2
Potatoes, sweet	1.4	.6	21.9	30,000	13,620	190.6	81.7	2,982.8
Radishes .....	.9	.1	4	3,656	1,660	14.9	1.7	66.4
Rhubarb .....	.4	.4	2.2	6,620	3,006	12	12	66.1
Squash .....	.7	.2	4.5	7,679	3,486	24.4	6.9	156.9
Salsify	1.3	.4	10.8	1,650	749	9.7	3	80.9
Spinach	2.1	.3	3.2	5,600	2,542	53.4	7.6	81.3
Tomatoes .....	.9	.4	3.9	58,440	26,532	238.8	106.1	1,034.7
Tomatoes, canned	1.2	.2	4	6,048	2,746	32.9	5.5	109.8
Turnips .....	.9	.1	5.7	27,840	12,639	113.8	12.6	720.1
Total .....	.....	.....	.....	919,884	417,623	8,169.6	953.9	52,586.2

Fruits:

Apples .....	.3	.4	11.2	53,600	24,334	73	97.3	2,725.4
Apples, evaporated	1.6	2.2	66.1	3,725	1,691	27	37.2	1,117.8
Apricots, dried	4.7	1	62.5	3,800	1,725	81	17.3	1,078.1
Berries †	1	.7	7.3	9,738	4,331	43.3	30.3	316.1
Raisins	2.3	3	68.5	1,250	567	13	17	388.4

† Composition assumed.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE C — Binghamton State Hospital. Total food materials and nutrients—(Conelnded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)								
Fruits—(Continued):								
Currants (dried).....	2.4	1.7	74.2	286	130	3.1	2.2	96.4
Cranberries .....	.4	.6	9.9	500	227	.9	1.4	22.4
Fruits, canned† .....	.6	.6	12.8	1,914	869	5.2	5.2	111.2
Grapes....	1	1.2	14.4	3,000	1,362	13.6	16.3	196.1
Lemons .....	.7	.6	5.8	1,020	462	3.2	2.8	26.8
Peaches†	1	.....	12.6	2,500	1,135	11.3	.....	143.1
Peaches, dried	4.7	1	62.5	1,600	726	34.1	7.3	453.7
Pears .....	.6	.8	14.2	2,400	1,089	6.6	8.7	154.6
Prunes.	1.8	.....	62.2	5,500	2,497	44.9	.....	1,553.1
Muskmelons .....	.3	.....	4.6	500	227	.7	.....	10.4
Total .....	.....	.....	.....	91,333	41,372	360.9	243	8,393.6
Total vegetable food....	.....	.....	.....	1,508,694	706,639	30,137.3	4,317.7	254,219.8
Total food.....	.....	.....	.....	2,690,283	1,243,078	69,431.5	85,178.2	268,909.6
Accessories, condiments, etc:								
Coffee .....	.....	.....	.....	19,800	8,989	.....	.....	.....
Cream of tartar .....	.....	.....	.....	500	227	.....	.....	.....

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE D
Weights and percentages of food materials and nutritive ingredients used in Binghamton Hospital for the Insane per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				
	Food material	NUTRIENTS				Food material	NUTRIENTS			Fuel value
		Protein	Fat	Carbo-hydrates			Protein	Fat	Carbo-hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent
Beef, veal and mutton.....	223	33	41	.....	.....	11.0	29.5	29.7	0.1	.....
Pork, lard, etc.....	40	3	23	.....	.....	1.9	2.6	16.9	.....	.....
Poultry.....	4	1	1	.....	.....	0.2	0.6	0.5	.....	.....
Fish, etc.....	45	5	1	.....	.....	2.3	4.0	0.8	.....	.....
Eggs.....	33	4	3	.....	.....	1.6	3.8	2.3	.....	.....
Butter.....	48	.....	41	.....	.....	2.4	0.4	29.2	.....	.....
Cheese.....	7	2	3	.....	.....	0.4	1.8	1.7	.....	.....
Milk.....	475	16	19	24	.....	28.4	13.9	13.7	5.5	.....
Total animal food.....	875	64	132	24	1,590	43.2	56.6	94.8	5.6	44.7
Cereals.....	317	35	5	238	.....	15.6	31.1	3.5	54.0	.....
Sugars and starches.....	87	.....	.....	78	.....	4.3	.....	0.2	17.7	.....
Vegetables.....	681	13	2	85	.....	33.6	11.8	1.2	19.5	.....
Fruits.....	68	1	.....	14	.....	3.3	0.5	0.3	3.2	.....
Total vegetable food...	1,153	49	7	415	1,965	56.8	4.34	5.2	94.4	55.3
Total food.....	2,028	113	139	439	3,555	100	100	100	100	100

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of foods used and attendance at the Buffalo State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE E

Average daily attendance. Buffalo State Hospital

	Men	Women	Total
Officers, employees and others.....	126.5	136	262.5
Patients	653.5	838	1,491.5
Total	780	974	1,754

Equivalent number of persons for 1 day, 640,215.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE E—(Continued)—Buffalo State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbohy- drates	Total weight		NUTRIENTS		
	Per cent	Per cent	Per cent	Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD.								
Beef:								
Sides	14.8	18.1	.....	244,508	111,007	16,429.0	20,092.3	.....
Forequarters	14.5	17.5	.....	12,129	5,507	798.5	963.7	.....
Corned and canned	26.3	19.0	.....	3,556	1,614	424.5	306.7	.....
Bologna	18.2	19.7	.....	2,066	938	170.7	184.8	.....
Liver	20.5	4.7	1.3	1,738	789	161.7	37.1	10.3
Total .....	.....	.....	.....	263,997	119,855	17,984.4	21,584.6	10.3
Lamb and mutton, sides	13	24	.....	34,059	15,463	2,010.2	3,711.1	.....
Veal sides	15.6	6.3	.....	11,997	5,447	849.7	343.2	.....
Pork sides	8.3	54.8	.....	73,256	33,258	2,760.4	18,225.4	.....
Poultry	14.2	11.5	.....	8,571	3,891	552.5	447.5	.....
Fish	10.2	2.3	.....	63,000	28,602	2,917.4	657.9	.....
Eggs	13.1	9.8	.....	28,592	12,981	1,700.5	1,282.1	.....
Butter	1	85	.....	68,543	31,118	311.2	26,450.3	.....
Cheese	26.1	33.5	2.3	19,124	8,683	2,266.3	2,908.8	199.7
Milk	3.3	4	5.0	553,536	251,305	8,293.1	10,052.2	12,565.2
Total animal food .....	.....	.....	.....	1,124,675	510,603	39,645.7	85,663.1	12,775.2

Preliminary Report on Dietaries for Hospitals for the Insane

VEGETABLE FOOD

Cereals:

Cerealine	9.7	1.1	78.7	1,920	872	84.6	9.8	686.3
Corn meal	9.3	2.4	75.1	13,950	6,333	588.9	152	4,756.1
Crackers	10.7	9.9	68.8	10,196	4,629	495.3	458.3	3,184.8
Farina	11	1.2	75.9	7,600	3,450	379.5	41.4	2,618.6
Graham flour	13.9	2.2	70.6	17,640	8,009	1,113.2	176.2	5,654.4
Hominy	8.5	.7	79.1	8,200	3,723	316.4	26.1	2,944.9
Macaroni	11.8	1.6	73.1	3,396	1,542	181.9	24.7	1,127.2
Rice	7.8	.4	79.2	12,520	5,684	443.4	22.7	4,501.7
Rolled oats	16.8	7.2	66.3	45,360	20,593	3,459.6	1,482.7	13,653.2
Wheat, crushed	12.2	1.8	74.5	9,200	4,177	509.6	75.2	3,111.9
Wheat flour	11.2	1.1	75.2	342,412	155,455	17,411	1,710	116,902.1
Total				472,394	214,467	24,983.4	4,179.1	159,141.2

Starches, sugars, etc.

Cornstarch			93.8	3,200	1,453			1,362.9
Sugar, granulated			100	90,955	41,293			41,293
Molasses			70	7,970	3,618			2,532.6
Sirup			70	54,096	24,560			17,192
Total				156,221	70,924			62,380.5

Vegetables:

Beans, dried	22.5	1.8	59.3	27,780	12,612	2,837.7	227	7,478.9
Beans, canned	1.1	.1	3.8	9,144	4,151	45.7	4.6	157.7
Beets	1.6	.1	10.3	12,100	5,498	87.9	5.5	565.8
Cabbage	1.4	.2	4.8	60,114	27,292	382.1	54.6	1,310
Carrots	1.1	.3	9.2	9,700	4,404	48.4	13.2	405.2
Corn, canned	2.8	1.2	19.3	23,160	10,515	294.4	126.2	2,029.4

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE E—Buffalo State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED			
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS	
	Per cent	Per cent	Per cent	Pounds	Kilograms	Protein	Fat
						Kilograms	Kilograms
VEGETABLE FOOD—(Cont'd)							
Vegetables—(Continued)							
Onions.....	1.5	.4	9.2	39,368	17,873	268.1	71.5
Parsnips.....	1.3	.4	10.8	18,075	8,206	106.7	32.8
Peas, split.....	24.6	1	62	3,405	1,546	380.3	15.5
Peas, canned.....	3.6	.2	9.8	12,024	5,459	196.5	10.9
Potatoes.....	1.7	.1	14.8	41,934	19,038	323.7	19
Spinach.....	2.1	.3	3.2	4,950	2,247	47.2	6.7
Squash.....	.7	.2	4.5	3,356	1,524	10.7	3
Succotash, canned.....	3.6	1	18.6	8,360	1,525	54.9	15.3
Tomatoes.....	.9	.4	3.9	22,200	10,079	90.7	40.3
Tomatoes, canned.....	1.2	.2	4	24,180	10,978	131.7	22
Turnips.....	.9	.1	5.7	36,875	16,741	150.7	16.7
Total.....	.....	.....	.....	351,725	159,683	5,457.4	684.8
							20,999.3
Fruits:							
Apples.....	.3	.4	11.2	22,950	10,419	31.3	41.7
Apples, canned.....	.3	.3	18	7,308	3,318	10	10
Apples, evaporated.....	1.6	2.2	66.1	3,975	1,805	30.9	39.7
Bananas.....	.8	.5	15.1	5,600	2,542	20.3	12.7
Currants, dried.....	2.4	1.7	74.2	1,150	522	12.5	8.9
Grapes.....	1	1.2	14.4	12,800	5,811	58.1	69.7
							1,166.9
							597.2
							1,193.1
							383.9
							387.3
							836.8

Preliminary Report on Dieteries for Hospitals for the Insane

Lemons .....	.7	.6	5.8	1,551	704	4.9	4.2	40.9
Peaches†	1	.....	12.6	2,500	1,135	11.4	.....	143
Peaches and apricots, evaporated	4.7	1	62.5	5,950	2,701	126.9	27	1,688.1
Peaches and pineapples, canned† .....	.4	.7	36.4	2,160	981	39.2	68.7	357.1
Pears, evaporated	2.8	5.4	72.9	1,975	897	25.1	48.5	653.9
Pineapples .....	.4	.3	9.7	438	199	.8	.6	19.3
Prunes	1.8	.....	62.2	5,250	2,384	42.9	.....	1,482.9
Raisins	2.3	3	68.5	1,150	522	12	15.6	357.6
Raspberries	1	.....	11.6	2,047	929	9.3	.....	107.4
Strawberries	1	.7	7.3	1,121	509	5.1	3.6	37.2
Total .....	.....	.....	.....	77,925	35,378	440.7	350.9	9,452.6
Total vegetable food .....	.....	.....	.....	1,058,265	480,452	30,881.5	5,214.8	251,973.6
Total food .....	.....	.....	.....	2,182,940	991,055	70,527.2	90,877.9	264,748.8

Accessories, condiments, etc.:

Allspice .....	.....	.....	.....	90	41	.....	.....	.....
Citron, orange and lemon peels .....	.....	.....	.....	75	34	.....	.....	.....
Ginger .....	.....	.....	.....	90	41	.....	.....	.....
Lemon extract .....	.....	.....	.....	26	12	.....	.....	.....
Mustard, dry .....	.....	.....	.....	65	30	.....	.....	.....
Mustard, prepared .....	.....	.....	.....	78	35	.....	.....	.....
Nutmegs .....	.....	.....	.....	39	18	.....	.....	.....
Pepper .....	.....	.....	.....	445	202	.....	.....	.....

† Composition assumed.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE F
Weights and percentages of food materials and nutritive ingredients used in Buffalo State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD					
	Food material	NUTRIENTS				Food material	NUTRIENTS				
		Protein	Fat	Carbo-hydrates			Protein	Fat	Carbo-hydrates		
PER PERSON PER DAY											
Beef, veal and mutton.....	Grams	220	33	40	.....	Calories	Per cent	29.5	28.2	.....	Per cent
Pork, lard, etc	52	4	29	.....	.....	.....	.....	3.9	20.1	.....	.....
Poultry	6	1	1	.....	.....	.....	.....	.8	.5	.....	.....
Fish, etc ..	45	4	1	.....	.....	.....	.....	4.2	.7	.....	.....
Eggs.....	20	3	2	.....	.....	.....	.....	2.4	1.4	.....	.....
Butter	49	.....	41	.....	.....	.....	.....	.....	29.1	.....	.....
Cheese	14	4	4	.....	.....	.....	.....	3.2	3.2	.1	.....
Milk	392	13	16	20	.....	.....	.....	11.8	11.1	4.7	.....
Total animal food.....	798	62	134	20	1,580	51.6	56.2	94.3	4.8	45.5	
Cereals.....	335	39	7	249	.....	21.6	35.5	4.6	60.1	.....	.....
Sugars and starches	111	.....	.....	97	.....	7.2	.....	.....	23.6	.....	.....
Vegetables	249	8	1	33	.....	16.1	7.7	.7	7.9	.....	.....
Fruits ...	55	1	.....	15	.....	3.5	.6	.4	3.6	.....	.....
Total vegetable food...	750	48	8	394	1,890	48.4	43.8	5.7	95.2	54.5	
Total food.....	1,548	110	142	414	3,470	100	100	100	100	100	

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Hudson River State Hospital for the Insane, for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE G

Average daily attendance. Hudson River State Hospital

	Men	Women	Total
Officers, employees and others	211	183	394
Patients	912	869	1,781
Total	1,123	1,052	2,175

Equivalent number of persons for 1 day, 793,875

Preliminary Report on Diets for Hospitals for the Insane

TABLE G—(Continued)—Hudson River State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD	Per cent	Per cent	Per cent			Kilograms	Kilograms	Kilograms
Beef:								
Gelatin.....	91.4	.1	.....	30	14	13	.....	.....
Forequarters	14.5	17.5	.....	52,454	23,814	3,453	4,167	.....
Sides	14.8	18.1	.....	289,597	131,477	19,459	23,798	.....
Corned, canned	26.3	19	.....	6,192	2,811	739	534	.....
Bologna.....	18.2	19.7	.....	7,104	3,225	587	635	.....
Total.....	.....	.....	.....	355,377	161,341	24,251	29,137	.....
Veal, sides.....	15.6	6.3	.....	8,725	3,961	618	250	.....
Mutton, sides.....	13	24	.....	61,498	27,920	3,630	6,701	.....
Pork:								
Sides	8.3	54.8	.....	54,423	24,708	2,051	13,540	.....
Lard.....	.....	100	.....	13,340	6,056	.....	6,056	.....
Total.....	.....	.....	.....	67,763	30,764	2,051	19,596	.....

Preliminary Report on Diets for Hospitals for the Insane

Poultry:									
Chicken, fowl.....	14.2	11.5	.....	3,704	1,682	239	193	.....	.....
Turkey	16.1	18.4	.....	3,400	1,544	249	284	.....	.....
Total.....	.....	.....	.....	7,104	3,226	488	477	.....	.....
Fish, etc.:									
Fresh*	9.2	.7	.....	58,983	26,778	2,464	187	.....	.....
Cod, salt.....	16	.4	.....	11,800	5,357	857	21	.....	.....
Mackerel, salt.....	13.9	21.2	.....	18,000	8,172	1,136	1,732	.....	.....
Salmon, salt†.....	19.5	7.5	.....	7,400	3,360	655	252	.....	.....
Clams.....	10.6	1.1	5.2	3,950	1,793	190	20	.....	93
Oysters.....	6	1.3	3.3	2,250	1,022	61	13	.....	34
Total.....	.....	.....	.....	102,383	46,482	5,363	2,225	.....	127
Eggs									
Butter.....	1	85	.....	72,906	33,099	4,336	3,243	.....	.....
Cheese	26.1	33.5	2.3	75,370	34,218	342	29,085	.....	.....
Milk	3.3	4	5	14,512	6,588	1,719	2,207	.....	152
Total animal food .....	.....	.....	.....	934,814	424,406	14,005	16,976	.....	21,220
VEGETABLE FOOD									
Cereals:									
Barley, pearled.....	9.3	1	77.6	4,100	1,861	173	19	.....	1,444
Corn meal.....	9.3	2.4	75.1	8,095	3,675	342	88	.....	2,760
Hominy	8.5	.7	79.1	17,920	8,136	692	57	.....	6,436

* Average of whitefish, flukes, weakfish, large steak hake, hake, cod, haddock, flounders, pollock and blues, which were mostly used.

† Composition assumed.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE G —Hudson River State Hospital. Total food materials and nutrients, etc. — (Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
						Protein	Fat	Carbohydrates
Per cent	Per cent	Per cent	Pounds	Kilograms	Kilograms	Kilograms	Kilograms	
VEGETABLE FOOD—(Cont'd)								
Cereals—(Continued):								
Farina	11	1.2	75.9	7,200	3,269	360	39	2,481
Flour, buckwheat.....	5.7	1	78.6	400	182	10	2	143
Flour, wheat.....	11.2	1.1	75.2	442,884	201,069	22,520	2,213	151,204
Crushed wheat	12.2	1.8	74.5	4,754	2,158	263	39	1,608
Rolled wheat	12.4	1.7	75.1	504	230	29	4	173
Rolled oats.....	16.8	7.2	66.3	17,820	8,090	1,359	582	5,364
Rice	7.8	.4	79.2	15,880	7,209	562	29	5,710
Macaroni.....	11.8	1.6	73.1	3,731	1,694	200	27	1,238
Crackers	10.5	12.5	69.1	7,983	3,624	331	453	2,505
Total .....	.....	.....	.....	531,271	241,197	26,841	3,552	181,166
Starches, sugars, etc.:								
Corn starch .....	.....	.....	93.8	2,680	1,217	.....	.....	1,142
Confectionery.....	.....	.....	96	550	250	.....	.....	240
Chocolate	12.9	48.7	30.3	154	70	9	34	21
Cocoa.....	21.6	28.9	37.7	96	44	10	13	17
Sago.....	.....	.....	93.8	476	216	.....	.....	203

Preliminary Report on Dieteries for Hospitals for the Insane

Sugar.....	.....	100	101,540	46,099	.....	.....	46,099
Syrup.....	.....	72	42,888	19,471	.....	.....	14,019
Tapioca.....	.4	87.5	3,512	1,594	6	5	1,395
Total .....	.....	.....	151,896	68,961	25	52	63,186

Vegetables:

Asparagus.....	1.8	.2	3.3	558	253	5	1	8
Beans, dried	22.5	1.8	59.3	16,295	7,398	1,665	133	4,387
Beans, butter	4.7	.3	14.6	1,855	842	40	3	123
Beans, lima.....	3.2	.8	9.9	2,700	1,226	39	4	121
Beans, string	2.3	.3	8.9	19,635	8,914	205	27	793
Beans, wax.....	2.3	.3	8.9	6,790	3,083	71	9	274
Beets	1.6	.1	10.3	44,150	20,044	321	20	2,064
Beets, green†	4.2	.6	6.3	1,675	760	32	5	48
Carrots	1.1	.3	9.2	37,278	16,924	186	51	1,557
Cabbage, early	1.4	.2	4.8	12,685	5,759	81	12	276
Cabbage, late	1.4	.2	4.8	42,628	19,853	271	39	930
Cauliflower	1.8	.5	4.7	670	304	5	2	14
Celery	1	.1	3	3,784	1,718	17	2	52
Celery tops	1	.1	3	950	431	4	.....	13
Corn, sweet.....	1.4	.4	8.6	44,040	19,994	280	80	1,719
Cucumbers .....	.8	.2	3.1	10,043	4,560	36	9	141
Eggplant.....	1.2	.3	5.1	54	25	.....	.....	1
Lettuce	1	.2	2.5	10,200	4,631	46	9	116
Lettuce	1	.2	2.5	2,655	1,205	12	2	30
Leeks.....	.7	.3	3.5	132	60	.....	.....	2
Onions, green.....	.5	.1	5.5	2,067	938	4	1	52
Onions.....	1.5	.4	9.2	48,450	21,997	330	88	2,024

† Composition assumed.

Preliminary Report on Dietaries for Hospitals for the Insane

Turnips.....	.9	.1	5.7	42,550	19,318	174	19	1,010
Tomatoes, canned	1.2	.2	4	14,592	6,625	80	13	265
Total .....	.....	.....	.....	875,072	397,283	8,137	979	45,832
Fruits:								
Apples.....	.3	.4	11.2	20,720	9,407	28	38	1,054
Apples, evaporated.....	1.6	2.2	66.1	8,677	3,939	63	87	1,604
Cranberries.....	.4	.6	9.9	125	57	.....	.....	6
Currants	1.1	.8	16.3	165	75	1	1	12
Muskmelons .....	.3	.....	4.6	198	90	.....	.....	4
Currants, dried	2.4	1.7	74.2	650	295	7	5	219
Citrons .....	.5	1.5	78.1	170	77	.....	1	60
Grapes	1	1.2	14.4	3,823	1,736	17	21	250
Raisins	2.3	3	68.5	650	295	7	9	202
Lemons .....	.7	.6	5.8	1,680	763	5	5	44
Oranges .....	.6	.....	7.5	750	341	2	.....	27
Huckleberries.....	.7	.7	13.5	4,414	2,004	14	14	271
Pears .....	.6	.8	14.2	1,500	681	4	5	97
Peaches †	1	.....	12.6	8,030	3,645	36	.....	459
Peaches, dried †	4.7	1	62.5	125	57	3	1	36
Prunes	1.8	.....	62.2	12,900	5,856	105	.....	3,643
Strawberries	1	.7	7.3	1,092	496	5	3	36
Cocoanut.....	6.3	57.4	31.1	215	97	6	56	30
Total .....	.....	.....	.....	65,884	29,911	303	246	8,054
Total vegetable food.....	.....	.....	.....	1,624,123	737,352	35,306	4,829	298,188
Total food.....	.....	.....	.....	3,324,575	1,509,357	92,109	114,726	319,687

† Composition assumed.

Preliminary Report on Diets for Hospitals for the Insane

TABLE G —Hudson River State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
Accessories, condiments, etc.:	Per cent	Per cent	Per cent					
Cloves	35	16	. . . . .	. . . . .	. . . . .
Coffee	30,350	13,779	. . . . .	. . . . .	. . . . .
Cream of tartar	445	202	. . . . .	. . . . .	. . . . .
Ginger	210	95	. . . . .	. . . . .	. . . . .
Lemon extract	72	33	. . . . .	. . . . .	. . . . .
Mint	21	10	. . . . .	. . . . .	. . . . .
Horseradish	310	141	. . . . .	. . . . .	. . . . .
Mustard	374	170	. . . . .	. . . . .	. . . . .
Nutmegs	6	3	. . . . .	. . . . .	. . . . .
Pepper	673	305	. . . . .	. . . . .	. . . . .
Bicarbonate of soda	450	204	. . . . .	. . . . .	. . . . .
Salt	27,525	12,496	. . . . .	. . . . .	. . . . .
Sage	24	11	. . . . .	. . . . .	. . . . .
Tea	5,714	2,594	. . . . .	. . . . .	. . . . .
Thyme	42	19	. . . . .	. . . . .	. . . . .
Vanilla	96	44	. . . . .	. . . . .	. . . . .
Vinegar	14,328	6,505	. . . . .	. . . . .	. . . . .

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE H
Weights and percentages of food materials and nutritive ingredients used in Hudson River State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value
	Food material	NUTRIENTS				Food material	NUTRIENTS			
		Protein	Fat	Carbo- hydrates			Protein	Fat	Carbo- hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	
Beef, veal, and mutton.....	243	36	45	....	.....	12.8	30.9	31.4	.....
Pork, lard, etc.....	39	3	25	...	.....	2	2.2	17.1	.....
Poultry.....	4	1	1	....	.....	.2	.5	.5	.....
Fish, etc.....	59	7	3	....	.....	3.1	5.9	1.9	.....
Eggs.....	42	5	4	....	.....	2.2	4.7	2.8	.....
Butter.....	43	....	36	....	.....	2.3	.4	25.4	.....
Cheese.....	8	2	3	....	.....	.4	1.9	1.9	.....
Milk.....	534	18	21	27	.....	28.1	15.2	14.8	.....
Total animal food.....	972	72	138	27	1,690	51.1	61.7	95.8	48.7	
Cereals.....	304	34	5	228	.....	16	29.2	3.1	56.6
Sugars and starches.....	87	....	...	80	.....	4.6	.....	.....	19.8
Vegetables.....	500	10	1	58	.....	26.3	8.8	.9	14.4
Fruits.....	38	....	....	10	.....	2	.3	.2	2.5
Total vegetable food...	929	44	6	376	1,780	48.9	38.3	4.2	93.3	
Total food.....	1,901	116	144	403	3,470	100	100	100	100	

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Long Island State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food, and in the food per person per day.

TABLE I

Average daily attendance. Long Island State Hospital

	Men	Women	Total
Officers, employees and others	350	278	628
Patients	1,231	1,576	2,807
Total	1,581	1,854	3,435

· Equivalent number of persons for one day 1,253,775.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE I—(Continued)—Long Island State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD								
Beef:								
Forequarters	14.5	17.5	.....	35,004	15,892	2,304	2,781	.....
Sides	14.8	18.1	.....	393,300	178,558	26,427	32,319	.....
Corned.....	15.7	22.8	.....	9,479	4,303	675	981	.....
Corned, canned	26.3	19	.....	30,314	13,763	3,619	2,615	.....
Liver	20.5	4.7	1.3	918	417	85	20	5
Total .....	.....	.....	.....	469,015	212,933	33,110	38,716	5
Mutton, sides.....	13	24	.....	89,698	40,723	5,294	9,773	.....
Pork:								
Sides (fresh).....	8.3	54.8	.....	39,002	17,707	1,470	9,703	.....
Bacon.....	9.3	62.5	.....	6,112	2,775	258	1,734	.....
Ham, smoked.....	13.6	33.4	.....	14,435	6,554	891	2,189	.....
Salt	1.9	86.2	.....	27,331	12,408	236	10,695	.....
Sausage	13	44.2	.....	300	136	17	60	.....
Shoulders, smoked	13	26.6	.....	5,594	2,540	330	675	.....
Lard.....	.....	100	.....	16,926	7,684	.....	7,684	.....
Total .....	.....	.....	.....	109,700	49,804	3,202	32,740	.....

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE I—Long Island State Hospital. Total food materials and nutrients used, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD—(Continued)								
Poultry:								
Chickens and fowls	14.2	11.5	.....	7,366	3,344	475	384	.....
Turkey	16.1	18.4	.....	3,234	1,468	236	270	.....
Total . . . . .	.....	.....	.....	10,600	4,812	711	654	.....
Fish, etc.:								
Fresh (average of 4)* . . .	9.8	1.8	.....	100,814	45,770	4,485	824	.....
Cod, salt	16	.4	.....	13,853	6,289	1,006	25	.....
Herring, smoked	20.5	8.8	.....	425	193	40	17	.....
Mackerel, salt.	13.9	21.2	.....	24,292	11,029	1,533	2,338	.....
Salmon, salt †	19.3	14	.....	4,660	2,116	408	296	.....
Oysters	6	1.3	3.3	53,000	24,062	1,443	313	794
Total . . . . .	.....	.....	.....	197,044	89,458	8,915	3,813	794
Eggs	13.1	9.8	.....	95,586	43,396	5,685	4,253	.....
Butter	1	85	.....	123,632	56,129	561	47,709	.....
Cheese	26.1	33.5	2.3	29,934	13,590	3,548	4,553	312
Milk	3.3	4	5	1,033,454	469,188	15,483	18,768	23,459
Total animal food . . . . .	.....	.....	.....	2,158,663	980,033	76,509	160,979	24,570

Preliminary Report on Diets for Hospitals for the Insane

TABLE I—Long Island State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			Total weight		WEIGHT USED		
	Protein	Fat	Carbo- hydrates			Protein	Fat	Carbohydrates
	Per cent	Per cent	Per cent	Pounds	Kilograms	Kilograms	Kilograms	Kilograms
VEGETABLE FOOD—Cont'd								
Vegetables—(Continued)								
Cabbage	1.4	.2	4.8	420,882	191,080	2,675	382	9,172
Cauliflower	1.8	.5	4.7	596	271	5	1	12
Celery	1	.1	3	6,651	3,019	30	3	90
Corn	1.4	.4	8.6	23,663	10,742	150	43	924
Corn, canned	2.8	1.2	19.3	12,116	5,507	154	66	1,063
Cucumbers .....	.8	.2	3.1	3,088	1,402	11	2	44
Egg plant	1.2	.3	5.1	7,532	3,420	41	10	174
Kale	2	.1	5.5	18,015	8,179	163	8	450
Leeks .....	.7	.3	3.5	5,860	2,660	18	8	93
Lettuce	1	.2	2.5	12,100	5,493	55	11	137
Onions	1.5	.4	9.2	49,873	22,642	340	90	2,083
Oyster plants	1.3	.4	10.8	188	85	1	.....	9
Parsnips	1.3	.4	10.8	21,475	9,749	127	39	1,052
Peas, green	3.6	.2	9.8	6,568	2,981	107	6	292
Peas, canned	3.6	.2	9.8	11,631	5,280	190	11	517
Peas, dried	24.6	1	62	5,034	2,285	562	23	1,416
Pickles, mixed	1.1	.4	4	7,500	3,405	37	14	136
Potatoes	1.7	.1	14.8	751,942	341,380	5,803	341	50,524
Pumpkins .....	.5	.1	2.6	8,640	3,922	20	4	101

Preliminary Report on Dietaries for Hospitals for the Insane

Radishes .....	.9	.1	4	9,225	4,188	38	4	167
Rhubarb .....	.4	.4	2.2	31,365	14,240	57	57	313
Spinach	2.1	.3	3.2	16,958	7,698	161	23	246
Squash .....	.7	.2	4.5	4,925	2,236	16	4	100
Succotash, canned	3.6	1	18.6	11,121	5,048	182	50	939
Sweet potatoes	1.4	.6	21.9	4,620	2,096	29	12	459
Tomatoes .....	.9	.4	3.9	45,491	20,653	186	22	805
Tomatoes, canned	1.2	.2	4	58,528	26,571	318	53	1,062
Turnips .....	.9	.1	5.7	147,270	66,860	601	67	3,811
Turnip tops, green	4.2	.6	6.3	2,200	998	42	6	62
Total. ....	.....	.....	.....	1,745,684	792,538	15,008	1,662	83,818

Fruits:

Apples .....	.3	.4	11.2	60,200	27,331	82	109	3,061
Apples, canned .....	.3	.3	18.	2,320	1,053	4	4	271
Apples, dried	1.6	2.2	66.1	21,940	9,961	160	219	6,562
Bananas.....	.8	.5	15.1	3,106	1,410	11	7	213
Citron, preserved .....	.5	1.5	78.1	36	16	.....	.....	12
Cranberries .....	.4	.6	9.9	450	204	1	1	20
Currants, dried	2.4	1.7	74.2	2,076	942	23	16	699
Grapes	1	1.2	14.4	1,960	890	9	10	128
Jams, assorted .....	.6	.1	84.5	84	38	.....	.....	32
Lemons ....	.7	.6	5.8	6,471	2,938	20	18	170
Muskmelons .....	.3	.....	4.6	8,466	3,843	11	.....	177
Oranges .....	.6	.....	7.5	1,822	828	5	.....	62
Peaches, canned † .....	.7	.1	10.8	48	21	.....	.....	2
Prunes, dried	1.8	.....	62.2	31,473	14,289	257	.....	8,887
Quinces †.....	.3	4	11.2	50	22	.....	.....	2
Raisins	2.3	3	68.5	2,309	1,048	24	31	718

† Composition assumed

Preliminary Report on Dietaries for Hospitals for the Insane

Nutmegs	114	5	.....	.....
Pepper, black	738	336	.....	.....
Peppers, green	160	73	.....	.....
Sage	3	1	.....	.....
Salt	36,160	16,418	.....	.....
Tea	8,928	4,054	.....	.....
Thyme	15 $\frac{3}{4}$	7	.....	.....
Vinegar	26,004	11,806	.....	.....

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE K
Weights and percentages of food materials and nutritive ingredients used in Long Island State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value
	Food material	NUTRIENTS				Food material	NUTRIENTS			
		Protein	Fat	Carbo-hydrates			Protein	Fat	Carbo-hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent
Beef, veal and mutton.....	202	31	39	.....	.....	10.7	27.4	28.7	.....	.....
Pork, lard, etc.....	40	3	26	.....	.....	2.1	2.3	19.4	.....	.....
Poultry.....	4	1	1	.....	.....	.2	.5	.4	.....	.....
Fish, etc.....	71	7	3	1	.....	3.8	6.4	2.3	.2	.....
Eggs.....	35	4	3	.....	.....	1.8	4.1	2.5	.....	.....
Butter.....	45	.....	38	.....	.....	2.4	.4	28.2	.....	.....
Cheese.....	11	3	4	.....	.....	.6	2.5	2.7	.....	.....
Milk.....	374	12	15	19	.....	19.8	11	11.1	4.4	.....
Total animal food.....	782	61	129	20	1,530	41.4	54.6	95.3	4.6	44.3
Cereals.....	341	38	5	256	.....	18.1	34.2	3.5	60.2	.....
Sugars and starches.....	71	.....	.....	65	.....	3.8	.....	.....	15.4	.....
Vegetables.....	632	12	1	67	.....	33.5	10.7	1	15.8	.....
Fruits.....	60	1	.....	17	.....	3.2	.5	.2	4	.....
Total vegetable food...	1,004	51	6	405	1,925	58.6	45.4	4.7	95.4	55.7
Total food	1,886	112	135	425	3,455	100	100	100	100	100

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Manhattan State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE L

Average daily attendance. Manhattan State Hospital

	Men	Women	Total
Officers, employees and others.....	676	522	1,198
Patients.....	3,164	3,557	6,721
Total	3,840	4,079	7,919

Equivalent number of persons for one day, 2,890,435.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE L—(Continued)—Manhattan State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD	Per cent	Per cent	Per cent			Kilograms	Kilograms	Kilograms
Beef:								
Forequarters.....	14.5	17.5	.....	255,112	115,821	16,794	20,268	.....
Sides	14.8	18.1	.....	726,087	329,644	48,787	59,665	.....
Corned.....	26.3	19	.....	93,338	42,375	11,144	8,051	.....
Kidney	13.7	1.9	.....	4,800	2,179	298	41	.....
Liver	20.5	4.7	1.3	17,340	7,872	1,613	370	102
Tripe	11.7	1.2	.....	2,100	953	111	11	.....
Gelatine.....	91.4	.1	.....	55	25	22	.....	.....
Total .....	.....	.....	.....	1,098,892	498,869	78,769	88,406	102
Veal, sides	15.6	6.3	.....	71,141	32,298	5,038	2,034	.....
Mutton, sides.....	13	24	.....	372,454	169,094	21,983	40,582	.....
Pork:								
Sides, fresh.....	8.3	54.8	.....	89,790	40,765	3,383	22,339	.....
Salt	1.9	86.2	.....	28,740	13,048	248	11,247	.....
Ham, smoked.....	13.6	33.4	.....	80,645	36,613	4,979	12,228	.....
Shoulder, smoked	13	26.6	.....	17,779.	8,072	1,049	2,147	.....

Preliminary Report on Dietaries for Hospitals for the Insane

Bacon.....	93	62.5	.....	43,973	19,963	1,856	12,476	.....
Head cheese	18.9	24.0	.....	1,875	851	160	204	.....
Sausage	13	44.2	.....	4,600	2,088	271	922	.....
Lard.....	.....	100	.....	14,727	6,686	.....	6,686	.....
Total .....	.....	.....	.....	282,129	128,086	11,946	68,249	.....
Poultry:								
Chicken	137	12.3	.....	7,232	3,283	449	404	.....
Turkey	16.1	18.4	.....	17,365	7,884	1,269	1,451	.....
Total .....	.....	.....	.....	24,597	11,167	1,718	1,855	.....
Fish:								
Fresh (average of 3*)	8.9	.2	.....	216,690	98,377	8,756	196	.....
Cod, salt	16	.4	.....	40,452	18,365	2,938	73	.....
Herring, smoked	20.5	9.8	.....	5,890	2,674	548	235	.....
Mackerel, salt	13.9	21.2	.....	50,760	23,045	3,202	4,855	.....
Salmon, salt†	19.3	14	.....	5,400	2,452	473	843	.....
Salmon, smoked	19.8	14	.....	20,425	9,273	1,789	1,298	.....
Salmon, canned	19.5	7.5	.....	6,576	2,986	582	224	.....
Clams.....	10.6	1.1	5.2	13,929	6,324	670	70	328
Oysters	6	1.3	3.3	27,859	12,647	759	164	417
Total .....	.....	.....	.....	387,981	176,143	19,717	7,488	745
Eggs.....								
Butter	13.1	9.8	.....	271,146	123,100	16,126	12,063	.....
	1	85	.....	325,612	147,828	1,478	125,652	.....

* The principal kinds of fish used were hake, cod, and haddock. † Composition assumed.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE L—Manhattan State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
						Protein	Fat	Carbohydrates
ANIMAL FOOD—(Continued)								
Cheese	Per cent 26.1	Per cent 33.5	Per cent 2.3	Pounds 69,401	Kilograms 31,508	Kilograms 8,223	Kilograms 10,555	Kilograms 724
Milk	3.3	4	5	133,698	60,699	2,003	2,428	3,034
Milk, condensed	8.9	8.2	54.1	750,474	340,716	30,323	27,938	184,327
Total animal food . . . . .	. . . . .	. . . . .	. . . . .	3,787,465	1,719,508	197,324	287,250	188,932
VEGETABLE FOOD								
Cereals:								
Barley, pearly	9.3	1	77.6	12,050	5,471	409	55	4,245
Corn flour	9.3	2.4	75.1	58,800	26,696	2,483	641	20,048
Corn meal	9.3	2.4	75.1	43,400	19,703	1,832	473	14,797
Hominy	8.5	.7	79.1	51,200	23,245	1,976	163	18,386
Farina	11	1.2	75.9	25,200	11,440	1,258	138	8,682
Graham flour	13.9	2.2	70.6	56,840	25,805	3,587	567	18,218
Rice	7.8	.4	79.2	72,728	33,019	2,575	132	26,151
Rolled oats	16.8	7.2	66.3	70,560	32,034	5,380	2,307	21,239
Rye flour	6.8	.9	78.7	33,712	15,306	1,041	135	12,045
Wheat flour	11.2	1.1	75.2	1,918,644	871,064	97,559	9,582	655,040
Crushed wheat	12	1.6	74.6	14,760	6,701	804	107	4,999
Macaroni	11.8	1.6	73.1	16,845	7,648	902	122	5,590

Preliminary Report on Dieteries for Hospitals for the Insane

Crackers, oyster.....	10.1	10.6	71.6	12,384	5,622	568	596	4,025
Crackers, soda	9.8	9.5	73.3	12,384	5,622	551	534	4,120
Total				2,399,507	1,089,376	120,925	15,555	817,585
Starches, sugars, etc.:								
Corn starch.....			93.8	10,194	4,628			4,341
Molasses			70	90,024	40,871			28,732
Sago.....			93.8	3,298	1,497			1,415
Sugar			100	394,999	179,329			179,329
Syrup.....			70	93,500	42,450			29,715
Tapioca .....	.4	.3	87.5	12,895	5,855	23	17	5,123
Cocoa.....	21.6	28.9	37.7	2,503	1,136	245	328	428
Chocolate	12.9	48.7	30.3	1,377	626	80	304	189
Total.....				608,790	276,392	348	649	249,272
Vegetables:								
Beans, dried.....	22.5	1.8	59.3	38,340	17,406	3,916	313	10,322
Asparagus	1.8	.2	3.3	2,914	1,323	24	3	43
Beets.....	1.6	.1	10.3	58,800	25,297	404	25	2,605
Beans, lima.....	3.2	.3	9.9	3,840	1,743	56	5	173
Beans, string	2.3	.3	8.9	12,520	5,685	130	17	506
Cabbage.....	1.4	.2	4.8	444,068	201,617	2,823	403	9,677
Carrots	1.1	.3	9.2	127,800	67,954	747	204	6,252
Cauliflower	1.8	.5	4.7	2,739	1,243	22	6	58
Celery	1	.1	3	6,845	3,107	31	3	93
Corn.....	1.4	.4	8.6	36,540	16,590	232	66	1,427
Corn, canned.....	2.8	1.2	19.3	24,096	10,940	306	131	2,112
Cucumber .....	.8	.2	3.1	12,600	5,720	45	12	177

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE I.—Manhattan State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)	Per cent	Per cent	Per cent		Kilograms	Kilograms	Kilograms	Kilograms
Vegetables—(Continued)								
Egg plant.....	1.2	.3	5.1	2,838	1,288	15	4	66
Kale†.....	4.1	.6	6.2	2,640	1,198	49	7	74
Leeks.....	.7	.3	3.5	3,630	1,648	12	5	57
Lettuce	1	.2	2.5	16,855	7,052	70	14	176
Onions	1.5	.4	9.2	107,250	48,692	730	195	4,479
Okra.....	.7	.1	3.6	90	41	.....	.....	2
Oyster plant.....	1.3	.4	10.8	770	349	5	1	38
Potatoes	1.7	.1	14.8	2,066,880	938,361	15,952	938	138,877
Parsnips	1.3	.4	10.8	67,050	30,441	396	122	3,287
Peas.....	3.6	.2	9.8	4,740	2,151	77	4	211
P' eas, dried.....	24.6	1	62	17,700	8,035	1,977	80	4,981
Peas, canned.....	3.6	.2	9.8	20,448	9,283	334	19	909
Peas, split.....	24.6	1	62	1,890	858	211	8	532
Pumpkins . . . . .	.5	.1	2.6	5,385	2,444	12	2	63
Pumpkins, canned.....	.8	.2	6.7	5,952	2,702	22	5	181
Radishes . . . . .	.9	.1	4	48,900	23,201	209	23	928
Rhubarb . . . . .	.4	.4	2.2	22,938	10,435	41	41	229
Sauerkraut.....	1.7	.5	3.8	4,800	2,179	37	11	82
Spinach	2.1	.3	3.2	28,820	12,857	271	39	411
Squash . . . . .	.7	.2	4.5	22,450	10,192	71	20	459

Preliminary Report on Dietaries for Hospitals for the Insane

Succotash, canned.....	3.6	1	18.6	8,976	4,075	147	41	757
Pickles, mixed.....	1.1	.4	4	29,760	14,511	160	58	580
Tomatoes .....	.9	.4	3.9	79,224	35,968	324	142	1,402
Tomatoes, canned	1.2	.2	4	59,520	27,022	324	54	1,081
Turnips .....	.9	.1	5.7	232,650	115,625	1,041	115	6,590
Total .....	.....	.....	.....	3,579,888	1,669,233	31,223	3,136	199,897
Fruits, nuts, etc.:								
Apples.....	.3	.4	11.2	80,600	36,593	110	146	4,099
Apples, dried	1.6	2.2	66.1	38,949	17,683	283	389	11,688
Bananas .....	.8	.5	15.1	24,990	11,345	91	56	1,713
Cherries	1.1	.8	16.3	785	356	3	3	58
Citron .....	.5	1.5	78.1	1,403	637	3	10	497
Cranberries.....	.4	.6	9.9	3,600	1,634	7	10	161
Currants	1.1	.8	16.3	323	146	2	1	23
Currants, dried	2.4	1.7	74.2	7,917	3,594	87	62	2,666
Grapes.....	1	1.2	14.4	7,380	3,350	34	40	482
Raisins	2.3	3	68.5	7,674	3,484	80	104	2,387
Lemons.....	.7	.6	5.8	9,050	4,108	28	25	238
Muskmelons .....	.3	.....	4.6	3,896	1,769	5	.....	81
Oranges.....	.6	.....	7.5	1,900	862	5	.....	64
Peaches†.....	.1	.....	12.6	3,000	1,362	14	.....	172
Peaches, evaporated....	.1	.....	12.6	27,157	12,329	123	.....	1,553
Peaches, canned.....	.7	.1	10.8	5,184	2,353	16	2	254
Pears .....	.6	.8	14.2	1,020	463	3	4	65
Pears, canned.....	.3	.3	18.0	3,552	1,612	5	5	290
Prunes.....	1.8	.....	62.2	42,329	19,217	346	.....	11,953
Raspberries	1	.....	11.6	2,040	926	9	.....	107

† Composition assumed.

Preliminary Report on Diets for Hospitals for the Insane

TABLE I—Manhattan State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Pounds	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)								
Fruits, nuts, etc.—(Cont'd)								
Strawberries.....	1	.7	7.3	6,590	2,992	29	24	218
Watermelons .....	.2	.1	2.7	16,452	7,469	15	7	202
Jam .....	.6	.1	84.5	455	206	1	.....	174
Cocoanut, shredded	6.3	57.4	31.5	419	190	12	109	60
Total .....	.....	.....	.....	296,665	134,680	1,361	997	39,205
Total vegetable food....	.....	.....	.....	6,884,850	3,169,681	153,857	20,337	1,305,959
Total food.....	.....	.....	.....	10,672,315	4,889,189	351,181	407,587	1,494,891
Accessories, condiments, etc.:								
Allspice .....	.....	.....	.....	144	.....	65	.....	.....
Bay leaves .....	.....	.....	.....	10	.....	4	.....	.....
Caraway seed .....	.....	.....	.....	82	.....	36	.....	.....
Catsup .....	.....	.....	.....	568	.....	259	.....	.....
Cinnamon .....	.....	.....	.....	160	.....	73	.....	.....
Cloves .....	.....	.....	.....	170	.....	77	.....	.....
Coffee.....	.....	.....	.....	136,102	.....	61,790	.....	.....
Cream of tartar.....	.....	.....	.....	2,585	1,173	.....	.....	.....

Preliminary Report on Dietaries for Hospitals for the Insane

German mustard.....	240	108	.....	.....	.....
Ginger.....	735	333	.....	.....	.....
Lemon essence.....	464	211	.....	.....	.....
Lemon peel.....	225	102	.....	.....	.....
Mustard.....	2,423	1,100	.....	.....	.....
Nutmeg and mace.....	187	84	.....	.....	.....
Pepper.....	2,210	1,003	.....	.....	.....
Peppers, green.....	1,560	708	.....	.....	.....
Salt.....	76,160	34,577	.....	.....	.....
Sage and thyme.....	184	84	.....	.....	.....
Soda, bicarb.....	2,831	1,285	.....	.....	.....
Tea.....	22,536	10,231	.....	.....	.....
Vanilla.....	464	211	.....	.....	.....
Vinegar.....	26,136	11,866	.....	.....	.....
Yeast.....	3,343	1,508	.....	.....	.....

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE M
Weights and percentages of food materials and nutritive ingredients used in Manhattan State Hospital
for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value
	Food material	NUTRIENTS				Food material	NUTRIENTS			
		Protein	Fat	Carbo-hydrates			Protein	Fat	Carbo-hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	
Beef, veal and mutton.....	243	36	45	....	.....	14.5	30.1	32.1	.....
Pork, lard, etc.....	44	4	23	....	.....	2.6	3.4	16.7	.....
Poultry.....	4	1	1	....	.....	.2	.5	.5	.....
Fish, etc.....	61	7	3	....	.....	3.6	5.6	1.8	.1
Eggs.....	42	6	4	....	.....	2.5	4.6	3	.....
Butter.....	51	....	43	....	.....	3.1	.4	30.8	.....
Cheese.....	11	3	4	....	.....	.7	2.3	2.6	.....
Milk.....	21	1	1	1	.....	1.3	.6	.6	.2
Milk, condensed.....	118	10	10	64	.....	7	8.7	6.9	12.3
Total animal food...	595	68	134	65	1,795	35.5	56.2	95	12.6	
Cereals.....	377	42	6	283	.....	22.5	34.4	3.8	54.7
Sugars and starches.....	96	....	....	86	.....	5.7	.1	.2	16.7
Vegetables.....	562	11	1	69	.....	33.5	8.9	.8	13.4
Fruits.....	47	....	....	14	.....	2.8	.4	.2	2.6
Total vegetable food.	1,082	53	7	452	2,135	64.5	43.8	5	87.4	
Total food.....	1,677	121	141	517	3,930	100	100	100	100	

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Middletown State Hospital for the Insane for the year ending Aug. 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE N

Average daily attendance. Middletown State Hospital

	Men	Women	Total
Officers, employees and others.	165	111	276
Patients.....	593	622	1,215
Total	758	733	1,491

Equivalent number of persons for one day, 544,215.

Preliminary Report on Diets for Hospitals for the Insane

TABLE N—(Continued)—Middletown State Hospital. Total food materials and nutrients used in one year

KINDS OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Per cent	Per cent	Protein	Fat	Carbohydrates
ANIMAL FOOD								
Beef:								
Sides	14.8	18.1	.....	236,443	107,345	15,887	19,429.4	.....
Forequarters	14.5	17.5	.....	14,802	6,720	974.3	1,176	.....
Corned.....	15.7	22.8	.....	733	333	52.2	75.9	.....
Cottolene.....	.....	100	.....	5,369	2,437	.....	2,437	.....
Total .....	.....	.....	.....	257,347	116,835	16,913.5	23,118.3	.....
Veal	15.6	6.3	.....	1,714	778	121.3	49	.....
Mutton	13	24	.....	25,690	11,663	1,516.1	2,799.1	.....
Pork:								
Bacon	9.3	62.5	.....	1,118	508	47.2	317.5	.....
Ham.....	13.6	33.4	.....	17,367	7,885	1,072.4	2,633.5	.....
Total .....	.....	.....	.....	18,485	8,393	1,119.6	2,951	.....
Poultry	14.2	11.5	.....	7,180	3,259	462.8	374.7	.....

Preliminary Report on Diets for Hospitals for the Insane

Fish, etc.:									
Fresh.....	9.8	1.8	.....	31,384	14,248	1,396.3	256.5	.....
Cod, salt.....	16	.4	.....	5,952	2,702	432.3	10.8	.....
Herring, smoked	20.5	88	.....	600	272	55.7	23.9	.....
Mackerel, salt.....	13.9	21.2	.....	9,200	4,176	580.4	885.2	.....
Salmon, salt†	19.3	14.0	.....	5,200	2,361	455.7	330.5	.....
Oysters, solids.....	6	1.3	33	5,096	2,313	138.8	30	76.3	
Clams.....	10.6	1.1	5.2	800	363	38.5	4	18.8	
Total .....	.....	.....	.....	58,232	26,435	3,097.7	1,540.9	.....	95.1
Eggs									
Butter	13.1	9.8	.....	33,176	15,062	1,973.1	1,476	.....
Cheese	1	85	.....	55,900	25,379	253.8	21,572.1	.....
Milk	26.1	33.5	2.3	7,528	3,417	891.7	1,144.6	78.5	
	3.3	4	5	830,993	377,271	12,449.9	15,090.8	18,863.5	
Total animal food.....	.....	.....	.....	1,296,245	588,492	38,799.5	67,923.2	.....	19,037.1
VEGETABLE FOOD									
Cereals:									
Barley	9.3	1	77.6	800	363	33.7	3.6	281.7	
Buckwheat flour.....	5.7	1	78.6	196	89	5	.9	70	
Corn meal.....	9.3	2.4	75.1	12,000	5,448	506.6	130.7	4,091.3	
Corn flour.....	9.3	2.4	75.1	5,880	2,669	248.2	64	2,004.4	
Hominy	8.5	.7	79.1	9,000	4,086	347.3	28.6	3,232	
Oatmeal.....	16.8	7.2	66.3	10,000	4,540	762.7	326.8	3,010	
Rice.....	7.8	.4	79.2	10,791	4,899	382.1	19.5	3,880	
Rye flour.....	6.8	.9	78.7	4,900	2,225	151.3	20	1,751.1	

† Composition assumed.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE N — Middletown State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)	Per cent	Per cent	Per cent		Kilograms		Kilograms	
Cereals—(Continued)								
Wheat flour	11.2	1.1	75.2	206,388	93,700	10,494.4	1,030.7	70,462.4
Graham flour	13.9	2.2	70.6	39,200	17,797	2,473.8	391.5	12,564.7
Farina	11	1.2	75.9	2,100	953	104.8	11.4	723.3
Macaroni.....	11.8	1.6	73.1	2,890	1,312	154.8	21	959
Total .....	.....	.....	.....	304,145	138,081	15,664.7	2,048.7	103,029.9
Sugars, starches, oil, etc.:								
Corn starch.....	.....	.....	93.8	1,502	682	.....	.....	639.7
Tapioca .....	.4	.3	87.5	1,602	727	2.9	2.1	636.1
Sugar ..	.....	.....	100	68,476	31,088	.....	.....	31,088
Molasses .....	.....	.....	70	10,243	4,650	.....	.....	3,255
Sirup .....	.....	.....	70	9,795	4,446	.....	.....	3,112.2
Candy .....	.....	.....	96	200	91	.....	.....	87.4
Oil .....	.....	100	.....	791	359	.....	359	.....
Chocolate	12.9	48.7	30.3	97	44	5.7	21.4	133
Cocoa.....	21.6	28.9	37.7	30	14	3	4	5.3
Total .....	.....	.....	.....	92,736	42,101	11.6	386.5	38,837

Preliminary Report on Dieteries for Hospitals for the Insane

Vegetables:	Beans, dried	22.5	1.8	59.3	8,527	3,871	871	69.7	2,295.5
	Corn, canned	2.8	1.2	19.3	2,472	1,122	31.4	18.4	216.5
	Peas, dried	24.6	1	62	1,955	888	218.4	8.8	550.6
	Peas, canned	3.6	.2	9.8	1,560	708	25.5	1.4	69.4
	Potatoes	1.7	.1	14.8	185,700	84,308	1,433.2	84.8	12,477.5
	Potatoes, sweet	1.4	.6	21.9	12,540	5,693	79.7	34.1	1,246.7
	Pumpkin	.5	.1	2.6	504	229	1.1	.2	6
	Total	.....	.....	.....	213,258	96,819	2,660.3	211.9	16,862.2
Fruits:	Apples	.3	.4	11.2	52,050	23,630	70.8	94.4	2,646.5
	Apples, dried	1.6	2.2	66.1	3,460	1,571	25.1	34.5	1,038.4
	Bananas	.8	.5	15.1	750	341	2.7	1.7	51.4
	Blackberries	1.3	1	10.9	1,158	526	6.8	5.2	57.3
	Citron	.5	1.5	78.1	204	93	.5	1.3	72.6
	Cocoanut	6.3	57.4	31.5	155	70	4.4	40.2	22.1
	Currants, dried	2.4	1.7	74.2	1,050	477	11.4	8.1	353.9
	Grapes	1	1.2	14.4	2,100	953	9.5	11.4	137.2
	Huckleberries	.7	.7	13.5	200	91	.6	.6	12.8
	Lemons	.7	.6	5.8	1,300	590	4.1	3.5	34.2
	Melons, musk	.3	.....	4.6	200	90	.3	.....	4.1
	Melons, water	.2	.1	2.7	2,000	908	1.8	.9	24.5
	Nuts, mixed	18.8	59.2	16.7	154	70	13.2	41.4	11.7
	Oranges	.6	.....	7.5	750	340	2	.....	25.4
	Peaches†	1	.....	12.6	10,475	4,755	47.5	.....	599.2
	Peaches, canned	.7	.1	10.8	300	136	.9	.1	14.7
	Peaches, dried†	4.7	1	62.5	900	409	19.2	4	255.6

†Composition assumed.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE N—Middleton State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein Kilograms	Fat Kilograms	Carbohydrates Kilograms
VEGETABLE FOOD—(Cont'd)								
Fruits—(Continued)								
Pears .....	.6	.8	14.2	2,100	953	5.7	7.6	135.3
Pears, canned .....	.3	.3	18	300	136	.4	.4	24.4
Prunes, dried	1.8	.....	62.2	8,393	3,810	68.5	.....	2,369.6
Pineapples .....	.4	.3	9.7	350	159	.6	.5	15.4
Raisins	2.3	3	68.5	1,800	817	18.7	24.3	559.6
Raspberries	1	.....	12.6	1,159	526	5.2	.....	66.3
Strawberries	1	.7	7.3	2,317	1,052	10.5	7.3	76.8
Total .....	.....	.....	.....	93,635	42,603	330.4	287.4	8,608.5
Total vegetable food .....	.....	.....	.....	703,764	319,604	18,667	2,934.5	167,337.6
Total food .....	.....	.....	.....	2,000,009	908,096	57,466.5	70,857.7	186,374.4
Accessories, beverages, con- diments, etc.:								
Baking powder, .....	.....	.....	.....	867	393	.....	.....	.....
Caraway seed .....	.....	.....	.....	55	25	.....	.....	.....
Cider .....	.....	.....	.....	1,096	498	.....	.....	.....
Coffee .....	.....	.....	.....	14,800	6,719	.....	.....	.....
Mustard .....	.....	.....	.....	75	34	.....	.....	.....

Preliminary Report on Diets for Hospitals for the Insane

Pepper.....	.....	.....	.....	.....	.....	.....
Saltpetre .....	.....	.....	.....	.....	.....	.....
Saleratus.....	.....	.....	.....	.....	.....	.....
Spices, miscellaneous . . .	.....	.....	.....	.....	.....	.....
Tea.....	.....	.....	.....	.....	.....	.....
Vinegar.....	.....	.....	.....	.....	.....	.....
Yeast.....	.....	.....	.....	.....	.....	.....

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Rochester State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE P

Average daily attendance. Rochester State Hospital

	Men	Women	Total
Officers, employees and others.....	68	65	133
Patients	275	272	547
Total.....	343	337	680

Equivalent number of persons for one day 248,200.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE P—(Continued)—Rochester State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED					
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS			
				Pounds	Kilograms	Protein	Fat	Carbohydrates	
ANIMAL FOOD									
Beef:									
Forequarters	14.5	17.5	.....	18,720	8,498	1,232.2	1,487.2	.....	.....
Sides, fresh	14.8	18.1	.....	74,878	33,995	5,031.3	6,152.2	.....	.....
Dried	26.4	6.9	.....	238	108	28.5	7.5	.....	.....
Liver	20.5	4.7	1.3	900	409	83.9	19.2	.....	5.3
Total	.....	.....	.....	94,736	43,010	6,375.9	7,666.1	.....	5.3
Veal, sides	15.6	6.3	.....	446	202	31.5	12.7	.....	.....
Mutton, sides	13	24	.....	16,636	7,553	981.9	1,812.7	.....	.....
Pork:									
Sides, fresh	8.3	54.8	.....	16,831	7,641	634.2	4,187.3	.....	.....
Sides, salt	1.9	86.2	.....	2,800	1,271	24.2	1,095.6	.....	.....
Bacon	9.3	62.5	.....	995	452	42	282.5	.....	.....
Ham, smoked	13.6	38.4	.....	3,375	1,532	208.4	511.7	.....	.....
Shoulder, smoked	13	26.6	.....	1,363	619	80.5	164.6	.....	.....
Lard	.....	100	.....	722	328	.....	328.0	.....	.....
Total	.....	.....	.....	26,086	11,843	989.3	6,569.7	.....	.....

Preliminary Report on Diets for Hospitals for the Insane

Poultry:									
Chicken.....	13.7	12.3	.....	1,806	820	112.3	100.9	.....
Turkey.....	15.1	18.4	.....	1,497	680	109.5	125.1	.....
Total .....	.....	.....	.....	3,303	1,500	221.8	226	.....
Fish, etc.:									
Fresh (average)	10.2	2.3	.....	13,450	6,106	622.8	140.4	.....
Codfish, salt	16	.4	.....	2,525	1,146	183.4	4.6	.....
Mackerel, salt.....	13.9	21.2	.....	3,000	1,362	189.3	288.8	.....
Salmon, canned.....	19.5	7.5	.....	96	44	8.6	3.3	.....
Salmon, salt†	19.5	7.5	.....	800	363	70.8	27.2	.....
Oysters	6	1.3	3.3	1,350	613	36.8	8	.....	20.2
Total .....	.....	.....	.....	21,221	9,634	1,111.7	472.3	.....	20.2
Eggs.....									
Butter	13.1	9.8	.....	12,069	5,479	717.8	536.9	.....
Cheese	1	85	.....	22,352	10,148	101.5	8,625.8	.....
Milk	26.1	33.5	2.3	4,475	2,032	530.4	680.7	.....	46.7
	3.3	4	5	253,910	115,275	3,804.1	4,611	.....	5,763.7
Total animal food ..	.....	.....	.....	455,234	206,676	14,865.9	31,213.9	.....	5,835.9
VEGETABLE FOOD									
Cereals:									
Barley, pearled.....	9.3	1	77.6	400	182	16.9	1.8	.....	141.3
Corn flour	9.3	2.4	75.1	3,400	1,544	143.6	37.1	.....	1,159.5
Corn meal.....	9.3	2.4	75.1	5,800	2,633	244.9	63.2	.....	1,977.4
Hominy.....	8.5	.7	79.1	1,000	454	38.6	3.2	.....	359.1

† Composition assumed.

Preliminary Report on Diets for Hospitals for the Insane

TABLE P—Rochester State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
	Per cent	Per cent	Per cent	Pounds	Kilograms	Protein Kilograms	Fat Kilograms	Carbohydrates Kilograms
VEGETABLE FOOD—(Cont'd)								
Cereals—(Continued)								
Pop corn.....	11.2	5.2	71.4	280	127	14.2	6.6	90.7
Farina.....	11	1.2	75.9	900	409	45	4.9	310.4
Rolled oats.....	16.8	7.2	66.3	5,400	2,452	411.9	176.6	1,625.7
Rice.....	7.8	.4	79.2	3,980	1,807	141.	7.2	1,431.1
Rye flour.....	6.8	.9	78.7	392	178	12.1	1.6	140.1
Wheat flour.....	11.2	1.1	75.2	114,660	52,055	5,830.2	572.6	39,145.3
Crushed wheat.....	12	1.6	74.6	125	57	6.9	.9	42.5
Graham flour.....	13.9	2.2	70.6	2,156	979	136.1	21.5	691.2
Crackers.....	10.5	12.5	69.1	2,600	1,180	123.9	147.5	815.4
Macaroni.....	11.8	1.6	73.1	534	242	28.6	3.9	176.9
Total .....	.....	.....	.....	141,627	64,299	7,193.9	1,048.6	48,106.6
Starches, sugars, etc.:								
Corn starch .....	.....	.....	93.8	760	345	.....	.....	323.6
Chocolate	12.9	48.7	30.3	60	27	3.5	13.1	8.2
Cocoa.....	21.6	28.9	37.7	6	3	.7	.9	1.1
Molasses .....	.....	.....	70	5,088	2,310	.....	.....	1,617
Sugar, granulated .....	.....	.....	100	21,935	9,958	.....	.....	9,958

Preliminary Report on Dietaries for Hospitals for the Insane

Syrup.....	.....	.....	70	11,412	5,181	.....	.....	3,626.7
Tapioca.....	.4	.3	87.5	1,000	454	1.8	1.3	397.3
Total .....	.....	.....	.....	40,261	18,278	6	15.3	15,931.9
Vegetables:								
Beans.....	22.5	1.8	59.3	20,580	9,343	2,102.2	168.2	5,540.4
Beans, lima.....	3.2	.3	9.9	80	36	1.1	.1	3.6
Beans, string	2.3	.3	8.9	3,560	1,616	37.2	4.8	143.8
Beets	1.6	.1	10.3	14,464	6,567	105.1	6.6	676.4
Beet greenst.....	4.2	.6	6.3	2,310	1,049	44	6.3	66.1
Cabbage	1.4	.2	4.8	36,123	16,400	229.6	32.8	787.2
Carrots	1.1	.3	9.2	5,312	2,412	26.5	7.3	221.9
Celery	1	.1	3	4,744	2,154	21.5	2.2	64.6
Corn.....	1.4	.4	8.6	12,850	5,834	81.7	23.3	581.7
Corn, canned	2.8	1.2	19.3	900	409	11.5	4.9	78.9
Cucumbers .....	.8	.2	3.1	915	415	3.3	.8	12.9
Cucumbers, pickles.....	.6	.3	3.4	13,200	5,973	35.9	18	203.8
Lettuce	1	.2	2.5	1,775	806	8.1	1.6	20.1
Onions.....	1.5	.4	9.2	10,140	4,604	69.1	18.4	423.6
Onions, green.....	.5	.1	5.5	855	388	1.9	.4	21.4
Peas, canned	3.6	.2	9.8	342	155	5.6	.3	15.2
Peas, green.....	3.6	.2	9.8	1,740	790	28.4	1.6	77.4
Peas, split.....	24.6	1	62	3,900	1,771	435.7	17.7	1,098
Parsnips	1.3	.4	10.8	10,880	4,940	64.2	19.8	533.5
Potatoes	1.7	.1	14.8	144,840	65,757	1,117.9	65.8	9,732
Radishes .....	.9	.1	4	1,017	462	4.1	.5	18.5
Rhubarb .....	.4	.4	2.2	1,400	636	2.5	2.5	14
Salsify.....	1.3	.4	10.8	975	443	5.8	1.8	47.8
Squash, summer.....	.7	.2	4.5	1,746	793	5.6	1.6	35.7

† Composition assumed.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE P—Rochester State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)	Per cent	Per cent	Per cent			Kilograms	Kilograms	Kilograms
Vegetables—(Continued):								
Succotash	3.6	1	18.6	54	25	.9	.3	4.6
Sweet potatoes	1.4	.6	21.9	3,066	1,392	19.5	8.4	304.8
Tomatoes .....	.9	.4	3.9	12,480	5,666	51	22.7	221
Tomatoes, canned	1.2	.2	4	1,728	785	9.4	1.6	31.4
Tomatoes, green .....	.9	.4	3.9	8,512	3,865	34.8	15.5	150.7
Turnips .....	.9	.1	5.7	26,048	11,826	106.4	11.8	674.1
Total .....	.....	.....	.....	346,546	157,312	4,670.5	467.6	21,805.1
Fruits:								
Apples .....	.3	.4	11.2	11,500	5,221	15.7	20.9	584.7
Apples, canned .....	.3	.3	18	1,344	610	1.8	1.8	109.8
Apples, dried	1.6	2.2	66.1	1,999	908	14.5	20	600.2
Apricots	1	.....	12.6	400	182	1.8	.....	23
Bananas .....	.8	.5	15.1	200	91	.7	.5	14
Black raspberries	1	.....	11.6	595	270	2.7	.....	31.3
Cherries	1.1	.8	16.3	300	136	1.5	1.1	22.2
Currants, dried	2.4	1.7	74.2	100	45	1.1	.7	33.4
Grapes	1	1.2	14.4	1,500	681	6.8	8.2	98.1
Lemons .....	.7	.6	5.8	1,190	540	3.8	3.2	31.3
Peaches	1	.....	12.6	360	164	1.6	.....	20.7

Preliminary Report on Dietsaries for Hospitals for the Insane

Peaches, dried†	4.7	1	62.5	300	136	6.4	1.4	85
Pears	.6	.8	14.2	1,225	556	3.3	4.4	79
Plums	.9		19.1	1,470	667	6		127.4
Prunes, dried	1.8		62.2	1,300	590	10.6		367
Raisins	2.3	3	68.5	95	43	1	1.3	29.4
Strawberries	1	.7	7.3	1,784	810	8.1	5.7	59.1
Total				25,662	11,650	87.4	69.2	2,315.6
Total vegetable food				554,496	251,539	11,957.8	1,600.7	88,159.2
Total food				1,009,730	458,215	26,823.7	32,814.6	93,995.1
Accessories, condiments, etc.:								
Baking powder				380	173			
Cinnamon				40	18			
Cloves				30	14			
Coffee, Rio				4,503	2,044			
Cream of Tartar				60	27			
Ginger				30	14			
Hops				30	14			
Lemon extract				4	2			
Mustard				90	41			
Nutmeg				17	8			
Pepper				150	68			
Peppers, green				12	6			
Saleratus				60	27			
Salt				4,480	2,034			
Tea, Oolong				1,396	634			
Vanilla extract				8	4			
Vinegar				5,728	2,601			

† Composition assumed.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE Q
Weights and percentages of food materials and nutritive ingredients used in Rochester State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				Full value
	Food material	NUTRIENTS				Food material	NUTRIENTS			
		Protein	Fat	Carbo- hydrates			Protein	Fat	Carbo- hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent
Beef, Veal and mutton	204	30	38	. . . .	. . . . .	11.1	27.5	28.9	. . . . .	. . . . .
Pork, Lard, etc	48	4	27	. . . .	. . . . .	2.6	3.7	20	. . . . .	. . . . .
Poultry	6	1	1	. . . .	. . . . .	.3	.8	.7	. . . . .	. . . . .
Fish, etc	39	5	2	. . . .	. . . . .	2.1	4.1	1.4	. . . . .	. . . . .
Eggs	22	3	2	. . . .	. . . . .	1.2	2.7	1.6	. . . . .	. . . . .
Butter	41	. . . .	35	. . . .	. . . . .	2.2	.4	26.3	. . . . .	. . . . .
Cheese	8	2	3	. . . .	. . . . .	.4	2	2.1	. . . . .	. . . . .
Milk	465	15	18	24	. . . . .	25.2	14.2	14.1	6.1	. . . . .
Total animal food	833	60	126	24	1,515	45.1	55.4	95.1	6.2	47
Cereals	259	29	4	194	. . . . .	14	26.8	3.2	51.2	. . . . .
Sugars and starches	74	. . . .	. . . .	64	. . . . .	4	. . . . .	.1	16.9	. . . . .
Vegetables	634	19	2	88	. . . . .	34.3	17.5	1.4	23.2	. . . . .
Fruits	47	. . . .	. . . .	9	. . . . .	2.6	.3	.2	2.5	. . . . .
Total vegetable food	1,014	48	6	355	1,710	54.9	44.6	4.9	93.8	53
Total food	1,847	108	132	379	3,225	100	100	100	100	100

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the St. Lawrence State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and in the food per person per day.

TABLE R

Average daily attendance. St. Lawrence State Hospital

	Men	Women	Total
Officers, employees and others.....	183	189	372
Patients.....	716.4	670.2	1,386.6
Total	899.4	859.2	1,758.6

Equivalent number of persons for one day, 641,889.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE R—(Continued)—*St. Lawrence State Hospital. Total food materials and nutrients used in one year*

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED			
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS	
	Per cent	Per cent	Per cent	Pounds	Kilograms	Protein Kilograms	Fat Kilograms Carbohydrates Kilograms
ANIMAL FOOD							
Beef:							
Forequarters	14.5	17.5	.....	65,370	29,678	4,303.3	5,193.7
Sides	14.8	18.1	.....	178,738	81,147	12,009.8	14,687.6
Corned, canned	26.3	19	.....	8,124	3,688	970	700.7
Dried	26.4	6.9	.....	1,527	693	183	47.8
Tripe	11.7	1.2	.....	600	272	31.8	3.3
Total ..	.....	.....	.....	254,359	115,478	17,497.9	20,633.1
Veal, sides	15.6	6.3	.....	9,358	4,249	662.9	267.6
Lamb, sides	14.1	18.7	.....	4,834	2,195	309.5	410.5
Mutton, sides.....	13	24	.....	16,322	7,410	963.3	1,778.4
Pork:							
Sides	8.3	54.8	.....	45,096	20,474	1,699.3	11,219.8
Bacon	9.3	62.5	.....	18,556	8,424	876.4	5,890
Ham and shoulder.....	14.1	33.2	.....	16,181	7,346	1,035.8	2,438.9
Sausage	13	44.2	.....	3,525	1,600	208	707.2
Lard.....	.....	100	.....	6,522	2,961	.....	2,961
Total .....	.....	.....	.....	89,880	40,805	3,819.5	23,216.9

Preliminary Report on Dieteries for Hospitals for the Insane

Poultry	14.2	11.5	.....	8,987	4,080	579.4	469.2	.....
Fish, etc.:								
- Fresh fish (average) *	9.7	1.3	.....	41,114	18,666	1,810.6	242.7	.....
Cod, salt	16	.4	.....	30,931	14,043	2,246.9	56.2	.....
Salmon, canned	19.5	7.5	.....	871	395	77	29.6	.....
Oysters	6	1.3	3.3	1,048	476	28.6	6.2	15.7
Total .....	.....	.....	.....	73,964	33,580	4,163.1	334.7	15.7
Eggs	13.1	9.8	.....	57,448	26,081	3,416.6	2,555.9	.....
Butter	1	85	.....	69,050	31,349	313.5	26,646.7	.....
Cheese	26.1	33.5	2.3	12,144	5,513	1,438.9	1,846.9	126.8
Cream, condensed	8.9	8.2	54.1	720	327	29.1	26.8	176.9
Milk	3.3	4	5	629,550	285,816	9,431.9	11,432.6	14,290.8
Total animal food .....	.....	.....	.....	1,226,616	556,883	42,625.6	89,619.3	14,610.2
VEGETABLE FOOD								
Cereals:								
Barley, pearled	9.3	1	77.6	500	227	21.1	2.3	176.2
Corn meal	9.3	2.4	75.1	13,153	5,971	553.3	143.3	4,484.2
Corn flour	9.3	2.4	75.1	26,200	11,895	1,106.2	285.6	8,933.1
Farina	11	1.2	75.9	1,950	885	97.4	10.6	671.7
Hominy	8.5	.7	79.1	11,425	5,187	440.9	36.3	4,102.9
Macaroni	11.8	1.6	73.1	3,184	1,446	170.6	23.1	1,057
Oat flakes	15.8	7.2	68.1	25,533	11,592	1,831.5	834.6	7,894.2
Rice	7.8	.4	79.2	13,982	6,348	495.2	25.4	5,027.6

*Average of cod, haddock, mackerel, weak fish and bluefish which were most used.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE R—St. Lawrence State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHTS USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
	Per cent	Per cent	Per cent	Pounds	Kilograms	Protein Kilograms	Fat Kilograms	Carbohydrates Kilograms
VEGETABLE FOOD—(Cont'd)								
Cereals—(Continued):								
Flour, winter wheat....	10.6	1	75.9	36,785	16,700	1,770.2	167	12,675.3
Flour, Graham.....	13.9	2.2	70.6	50,000	22,700	3,155.3	499.4	16,026.2
Flour, spring wheat....	11.8	1.1	75	411,600	186,866	22,050.2	2,055.5	140,149.5
Total .....	.....	.....	.....	594,312	269,817	31,693.9	4,083.1	201,197.9
Starches, sugars, etc :								
Corn starch.....	.....	.....	93.8	1,800	817	.....	.....	766.4
Chocolate	12.9	48.7	30.3	54	25	3.2	12.2	7.6
Cocoa.....	21.6	28.9	37.7	65	30	6.5	8.7	11.3
Sago.....	.....	.....	93.8	200	91	.....	.....	85.4
Sugar.....	.....	.....	100	83,618	37,962	.....	.....	37,962
Syrup.....	.....	.....	70	41,910	19,027	.....	.....	13,313.9
Tapioca .....	.4	.3	87.5	3,598	1,634	6.6	4.9	1,429.8
Total .....	.....	.....	.....	131,245	59,586	16.3	25.8	53,581.4
Vegetables:								
Beans.....	22.5	1.8	59.3	31,502	14,302	3,218	257.4	8,481.1
Beans, string, canned...	1.1	.1	3.8	446	202	2.2	.2	7.7
Beets	1.6	.1	10.8	18,800	8,535	136.6	8.5	879.1

Preliminary Report on Dietaries for Hospitals for the Insane

Beet greens †	4.2	.6	6.3	153	69	2.9	.4	4.3
Cabbage	1.4	.2	4.8	52,425	23,801	333.2	47.6	1,142.5
Carrots	1.1	.3	9.2	16,120	7,318	80.5	22	673.2
Green corn	1.4	.4	8.6	24,500	11,123	155.8	44.5	956.6
Canned corn	2.8	1.2	19.3	5,376	2,441	68.4	29.3	471.1
Celery	1	.1	3	1,675	760	7.6	.8	22.8
Cucumbers	.8	.2	3.1	14,310	6,497	52	13	201.4
Egg plant	1.2	.3	5.1	60	27	.3	.1	1.4
Lettuce	1	.2	2.5	14,000	6,356	63.6	12.7	158.9
Onions	1.5	.4	9.2	23,880	10,842	162.6	43.4	997.5
Onions, green	.5	.1	5.5	1,852	841	4.2	.8	46.3
Parsnips	1.3	.4	10.8	11,400	5,176	67.3	20.7	559
Peas, green	3.6	.2	9.8	8,900	4,041	145.5	8.1	396
Peas, canned	3.6	.2	9.8	4,202	1,908	68.7	3.8	187
Peas, split	24.6	1.	62	6,369	2,892	711.5	28.9	1,793
Potatoes	1.7	.1	14.8	395,160	179,403	3,049.9	179.4	26,551.6
Pumpkins	.5	.1	2.6	1,020	463	2.3	.5	12
Radish, winter	.9	.1	4	6,800	3,087	27.8	3.1	123.5
Radish, green	.9	.1	4	2,070	940	8.5	.9	37.6
Rhubarb	.4	.4	2.2	710	322	1.3	1.3	7.1
Squash	.7	.2	4.5	8,350	3,791	26.5	7.6	170.6
Tomatoes	.9	.4	3.9	15,900	7,219	65	28.9	281.5
Tomatoes, canned	1.2	.2	4	6,860	3,114	37.4	6.2	124.6
Turnips	.9	.1	5.7	30,840	14,001	126	14	798.1
Total	.....	.....	.....	703,680	319,471	8,625.6	784.1	45,085.5

Fruits:

Apples.....	.3	.4	11.2	35,400	16,072	48.2	64.3	1,800.1
Apples, canned	.3	.3	18	890	404	1.2	1.2	72.7

† Composition assumed.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE R—St. Lawrence State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHTS USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)								
Fruits—(Continued)								
Apples, dried	1.6	2.2	66.1	11,160	5,067	81.1	111.5	3,349.2
Bananas . . . . .	.8	.5	15.1	1,410	640	5.1	3.2	96.7
Strawberries	1	.7	7.3	2,600	1,180	11.8	8.8	86.1
Raspberries	1	.....	11.6	1,525	692	7	.....	80.6
Currants	1.1	.8	16.3	400	182	2	1.5	29.7
Cocoanut, shredded	6.3	57.4	31.5	64	29	1.8	16.7	9
Cranberries . . . . .	.4	.6	9.9	160	73	.3	.4	7.3
Currants, red†	1.1	.8	16.3	468	212	2.3	1.7	34.6
Currants, dried	2.4	1.7	74.2	2,825	1,283	30.8	21.8	952
Grapes	1	1.2	14.4	4,320	1,961	19.6	23.5	282.4
Raisins	2.3	3	68.5	1,956	888	20.4	26.6	608.3
Lemons . . . . .	.7	.6	5.8	2,427	1,102	7.7	6.6	63.9
Melons, musk . . . . .	.3	.....	4.6	1,650	749	2.3	.....	34.5
Melons, water . . . . .	.2	.1	2.7	1,650	749	1.5	.8	20.2
Oranges . . . . .	.6	.....	7.5	1,568	712	4.3	.....	53.4
Peaches†	1	.....	12.6	600	272	2.7	.....	34.3
Peaches, canned . . . . .	.7	.1	10.8	510	232	1.6	.2	25.1
Prunes	1.8	.....	62.2	10,045	4,560	82.1	.....	2,836.3

Preliminary Report on Dieteries for Hospitals for the Insane

Pine apples, canned.....	.4	.7	36.4	96	44	.2	.3	16
Currant jelly†	1.1	.....	77.2	11,970	5,434	59.8	.....	4,195
Total .....	.....	.....	.....	93,694	42,537	393.8	288.6	14,687.4
Total vegetable food...	.....	.....	.....	1,522,931	691,411	40,729.6	5,181.6	314,552.2
Total food.....	.....	.....	.....	2,749,547	1,248,294	83,355.2	94,801	329,162.4
Accessories, condiments, etc.:								
Allspice .....	.....	.....	.....	34	15	.....	.....	.....
Cider .....	.....	.....	.....	376	171	.....	.....	.....
Cloves.....	.....	.....	.....	14	6	.....	.....	.....
Cinnamon .....	.....	.....	.....	95	43	.....	.....	.....
Coffee, toasted .....	.....	.....	.....	24,019	10,905	.....	.....	.....
Ginger .....	.....	.....	.....	109	50	.....	.....	.....
Horseradish .....	.....	.....	.....	720	327	.....	.....	.....
Lemon extract.....	.....	.....	.....	60	27	.....	.....	.....
Mustard.....	.....	.....	.....	164	75	.....	.....	.....
Nutmegs.....	.....	.....	.....	22	10	.....	.....	.....
Pepper .....	.....	.....	.....	381	173	.....	.....	.....
Pickles.....	.....	.....	.....	6,800	3,087	.....	.....	.....
Salsify .....	.....	.....	.....	2,100	958	.....	.....	.....
Coarse salt.....	.....	.....	.....	10,796	4,901	.....	.....	.....
Table salt.....	.....	.....	.....	10,720	4,867	.....	.....	.....
Tea, oolong .....	.....	.....	.....	5,613	2,548	.....	.....	.....
Vinegar .....	.....	.....	.....	21,120	9,589	.....	.....	.....

† Composition assumed.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE S
Weights and percentages of food materials and nutritive ingredients used in St. Lawrence State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS				Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value-
	Food material	NUTRIENTS				Food material	NUTRIENTS			
		Protein	Fat	Carbo-hydrates			Protein	Fat	Carbo-hydrates	
PER PERSON PER DAY	Grams	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent
Beef, veal and mutton.....	201	30	36	....	.....	23.3	24.3	.....	.....	.....
Pork, lard, etc.....	64	6	36	....	.....	4.6	24.5	.....	.....	.....
Poultry.....	6	1	1	....	.....	.7	.5	.....	.....	.....
Fish, etc	52	7	....	....	.....	5	.4	.....	.....	.....
Eggs.....	41	5	4	....	.....	4.1	2.7	.....	.....	.....
Butter	49	....	42	....	.....	.4	28.1	.....	.....	.....
Cheese	9	2	3	....	.....	1.7	2	.....	.....	.....
Milk	445	15	18	22	.....	11.3	12.1	4.3	.....	.....
Cream, condensed.....	1	....	....	1	.....	.....	.....	.1	.....	.....
Total animal food.....	868	66	140	23	1,670	51.1	94.6	4.4	.....	41.6
Cereals	423	49	6	316	.....	38	4.3	61.6	.....	.....
Sugars and starches	90	....	....	81	.....	.....	.....	15.8	.....	.....
Vegetables	498	13	1	70	.....	10.4	.8	13.7	.....	.....
Fruits	66	1	1	23	.....	.5	.3	4.5	.....	.....
Total vegetable food...	1,077	63	8	490	2,340	48.9	5.4	95.6	.....	58.4
Total food.....	1,945	129	148	513	4,010	100	100	100	.....	100

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Utica State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food and the food per person per day.

TABLE T
Utica State Hospital

	Men	Women	Total
Officers, employees and others.....	91	95	186
Patients	479	535	1,014
Total	570	630	1,200

Equivalent number of persons for one day, 438,000.

Preliminary Report on Diets for Hospitals for the Insane

TABLE T—(Continued) — Utica State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
						Protein	Fat	Carbohydrates
				Pounds	Kilograms	Kilograms	Kilograms	Kilograms
ANIMAL FOOD								
Beef:								
Forequarters	14.5	17.5	.....	8,900	4,041	581	702	.....
Sides	14.8	18.1	.....	143,641	65,213	9,651	11,804	.....
Total.....	....	....	.....	152,541	69,254	10,232	12,506	.....
Veal, sides	15.6	6.3	.....	17,061	7,746	1,208.4	488	.....
Lamb and mutton, sides....	13	24	.....	48,039	21,810	2,835.3	5,134.4	.....
Pork:								
Sides	8.3	54.8	.....	17,216	7,816	648.9	4,283.1	.....
Ham	13.6	33.4	.....	9,024	4,097	557.1	1,368.3	.....
Bacon	9.3	62.5	.....	5,169	2,347	218.2	1,466.9	.....
Salt	1.9	86.2	.....	4,100	1,861	35.4	1,604.2	.....
Lard.....	....	100	.....	3,000	1,362	.....	1,362	.....
Total .....	....	....	.....	38,509	17,483	1,459.6	10,084.5	.....
Poultry	13.7	12.3	.....	1,753	796	109	97.9	.....

Preliminary Report on Dietaries for Hospitals for the Insane

Cucumbers .....	.8	.2	3.1	21,123	9,590	76.7	19.2	297.3
Scotch kale	4.1	.6	6.2	155	70	2.9	.4	4.3
Kohl rabi	2	.1	5.5	3,530	1,603	32	1.6	88.2
Leeks	7	.3	3.5	94	43	.3	.1	1.5
Lettuce	1	.2	2.5	5,506	2,500	25	5	62.5
Okra	1.4	.2	6.5	410	186	2.6	.4	12.1
Onions	1.5	.4	9.2	38,040	17,270	259	69.1	1,588.8
Onions, green .....	.5	.1	5.5	4,359	1,979	9.9	2	108.8
Parsnips	1.3	.4	10.8	17,760	8,063	104.8	32.2	870.8
Peas, green	3.6	.2	9.8	6,760	3,069	110.4	6.1	300.8
Peas, split	24.6	1	62	600	272	66.9	2.7	168.6
Potatoes	1.7	.1	14.8	301,080	136,690	2,323.7	136.7	20,230.1
Pumpkins .....	.5	.1	2.6	1,500	681	3.4	.7	17.7
Radishes .....	.9	.1	4	5,570	2,529	22.8	2.5	101.1
Rhubarb .....	.4	.4	2.2	14,430	6,551	26.2	26.2	144.1
Salsify	1.3	.4	10.8	850	386	5	1.5	41.7
Spinach	2.1	.3	3.2	9,820	4,458	93.6	13.4	142.6
Squash	7	.2	4.5	26,680	12,113	84.8	24.2	545.1
Tomatoes .....	.9	.4	3.9	24,660	11,195	100.8	44.8	436.6
Tomatoes, green .....	.9	.4	3.9	1,440	654	5.9	2.6	25.5
Turnips .....	.9	.1	5.7	28,774	13,063	117.6	13.1	744.6
Total .....	....	....	.....	684,623	310,818	5,250.5	666.8	32,651.2

Fruits:

Apples, canned .....	.3	.3	18	2,250	1,021	3.1	3.1	183.7
Currants, dried	2.4	1.7	74.2	30	136	3.3	2.3	100.9
Apples, dried	1.6	2.2	66.1	891	405	6.5	8.9	267.7

† Composition assumed.

Preliminary Report on Dietsaries for Hospitals for the Insane

TABLE T—Utica State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED		
	Protein	Fat	Carbo- hydrates	Weight used		NUTRIENTS
	Per cent	Per cent	Per cent	Pounds	Kilograms	
VEGETABLE FOOD—(Cont'd)						
Fruits—(Continued):						
Grapes...	1	1.2	14.4	1,000	454	4.5
Lemons .....	.7	.6	5.8	540	245	1.7
Muskmelons .....	.3	...	4.6	9,450	4,290	12.9
Oranges .....	.6	...	7.5	900	409	2.4
Peaches	1	...	12.6	3,000	1,362	13.6
Pineapples .....	.4	.3	9.7	600	272	1.1
Prunes, dried	1.8	...	62.2	2,750	1,249	22.5
Raisins	2.3	3	68.5	1,200	545	12.5
Raspberries, black	1	...	12.6	1,522	691	6.9
Raspberries, dried	7.3	1.8	80.2	952	432	31.5
Strawberries	1	.7	7.3	2,700	1,226	12.3
Total .....	...	...	...	28,055	12,737	134.8
Total vegetable food ..	...	...	...	1,078,506	489,641	21,099.1
Total food .....	...	...	...	1,872,484	850,007	48,065.5
						57,371.8
						164,674.2
						2,731.2
						89.5
						846.5
						87.1
						373.3
						776.9
						26.4
						171.6
						30.7
						197.3
						14.2
						65.4

Preliminary Report on Diets for Hospitals for the Insane

Accessories, condiments, beverages, etc.:									
Basil .....	..	...	...	...	...	4½	2	.....	.....
Coffee .....	..	...	...	...	...	11,500	5,221	.....	.....
Distilled liquors.....	..	...	...	...	...	1,728	785	.....	.....
Horseradish.....	..	...	...	...	...	2,440	1,108	.....	.....
Mint.....	..	...	...	...	...	2,360	1,071	.....	.....
Pepper.....	..	...	...	...	...	161	73	.....	.....
Salt .....	..	...	...	...	...	8,040	3,650	.....	.....
Spices .....	..	...	...	...	...	642	291	.....	.....
Tea .....	..	...	...	...	...	5,707	2,591	.....	.....
Vinegar .....	..	...	...	...	...	11,600	5,266	.....	.....
Wine .....	..	...	...	...	...	872	396	.....	.....
Total .....	...	...	...	...	...	449,015	20,385	.....	.....

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE U
Weights and percentages of food materials and nutritive ingredients used in Utica State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS			Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value	
	Food material	NUTRIENTS			Food material	NUTRIENTS				
		Protein	Fat			Carbo-hydrates	Protein	Fat		Carbo-hydrates
PER PERSON PER DAY	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent	
Beef, veal, and mutton . . .	225	32	41	.....	11.6	30	31.8	.....	.....
Pork, lard, etc	40	3	23	.....	2	3	17.7	.....	.....
Poultry	2	....	....	.....	.1	....	....	.....	.....
Fish, etc	42	6	1	.....	2.2	5	.7	.....	.....
Eggs	20	3	2	.....	1	3	1.6	.....	.....
Butter	48	....	40	.....	2.5	....	31.1	.....	.....
Cheese	10	3	5	.....	.5	2.3	2.5	.....	.....
Milk.....	436	14	17	.....	22.5	13	13.4	5.5	.....
Total animal food . . .	823	61	129	1,540	42.4	56.3	98.8	5.5	46.7	
Cereals	318	36	....	.....	16.4	32.7	.....	59.7	.....
Sugars and starches	62	....	....	.....	3.2	....	.....	14.5	.....
Vegetables	709	12	2	.....	36.5	11	1.2	18.7	.....
Fruits	29	....	....	.....	1.5	.....	.....	1.6	.....
Total vegetable food .	1,118	48	2	1,755	57.6	43.7	1.2	94.5	53.3	
Total food.....	1,941	109	131	3,295	100	100	100	100	100	

Preliminary Report on Dietaries for Hospitals for the Insane

Statistics of food used and attendance at the Willard State Hospital for the Insane for the year ending August 31, 1898, and the computed amounts of nutrients in the total food, and in the food per person per day.

TABLE V

Average daily attendance. Willard State Hospital

	Men	Women	Total
Officers, employees and others.	230	236	466
Patients	1,116	1,149	2,265
Total	1,346	1,385	2,731

Equivalent number of persons for one day, 996,815.

Preliminary Report on Dieteries for Hospitals for the Insane

TABLE V—(Continued)—Willard State Hospital. Total food materials and nutrients used in one year

KIND OF FOOD MATERIALS	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Pounds	Kilograms	Protein	Fat	Carbohydrates
ANIMAL FOOD								
Beef:								
Forequarters.....	14.5	17.5	.....	80,655	36,617	5,309.5	6,408	.....
Sides, fresh.....	14.8	18.1	.....	322,619	146,469	21,677.4	26,510.9	.....
Sausage, bologna.....	18.2	19.7	.....	800	363	66.1	71.5	.....
Corned, canned.....	26.3	19	.....	5,124	2,326	611.8	441.9	.....
Total.....	....	....	.....	409,198	185,775	27,664.8	33,432.3	.....
Veal, sides.....	15.6	6.3	.....	5,480	2,488	388.1	156.7	.....
Lamb, sides.....	14.1	18.7	.....	2,770	1,258	177.4	235.2	.....
Mutton, sides.....	13	24	.....	66,105	30,012	3,901.6	7,202.9	.....
Pork:								
Sides.....	8.3	54.8	.....	45,329	20,580	1,708.1	11,277.8	.....
Head cheese.....	18.9	24	.....	504	229	43.3	54.9	.....
Bacon.....	9.3	62.5	.....	1,600	726	67.5	453.8	.....
Ham, smoked.....	13.6	33.4	.....	8,882	4,032	548.4	1,346.7	.....

Preliminary Report on Dieteries for Hospitals for the Insane

Shoulders, smoked.....	13	26.6	.....	14,000	6,356	826.3	1,690.7	.....
Pork, salt	1.9	86.2	.....	5,466	2,482	47.2	2,139.5	.....
Total .....	.....	.....	.....	75,781	34,405	3,240.8	16,963.4	.....
Poultry:								
Chickens	13.7	12.3	.....	6,971	3,165	433.6	389.3	.....
Turkeys.....	16.1	18.4	.....	994	451	72.6	83	.....
Totals.....	.....	.....	.....	7,965	3,616	506.2	472.3	.....
Fish, etc:*								
Fish, fresh (average) ..	9.8	.5	.....	52,335	23,760	2,328.5	118.8	.....
Cod, salt.....	16	.4	.....	16,767	7,612	1,217.9	30.5	.....
Herring, smoked.....	20.5	8.8	.....	1,400	636	130.4	56	.....
Mackerel, salt.....	13.9	21.2	.....	20,248	9,193	1,277.8	1,948.9	.....
Salmon, canned	19.5	7.5	.....	257	117	22.8	8.8	.....
Salmon, smoked†.....	19.5	7.5	.....	2,400	1,090	21.3	8.2	.....
Oysters	6	1.3	3.3	3,600	1,633	98	21.2	53.9
Total .....	.....	.....	.....	97,007	44,041	5,096.7	2,192.4	53.9
Eggs								
Butter	13.1	9.8	.....	36,121	16,399	2,148.3	1,607.1	.....
Cheese.....	1	85	.....	107,629	48,863	488.6	41,533.6	.....
Milk	26.1	33.5	2.3	24,462	11,106	2,898.7	3,720.5	255.4
	3.3	4	5	805,552	365,720	12,068.8	14,628.8	18,286
Total animal food.....	.....	.....	.....	1,638,070	743,684	58,580.3	122,145.2	18,595.3

* Bluefish, weak fish, red snappers, cod and haddock were the principal fish used. † Composition assumed.

Preliminary Report on Dietaries for Hospitals for the Insane

TABLE V — Willard State Hospital. Total food materials and nutrients, etc.—(Continued)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		NUTRIENTS		
				Per cent	Per cent	Protein	Fat	Carbohydrates
	Per cent	Per cent	Per cent	Pounds	Kilograms	Kilograms	Kilograms	Kilograms
VEGETABLE FOOD								
Cereals:								
Barley, pearled.....	9.3	1	77.6	648	294	27.3	3	248.1
Buckwheat flour.....	5.7	1	78.6	5,775	2,622	149.5	26.2	2,060.9
Corn flour.....	9.3	2.4	75.1	4,825	2,191	203.8	52.6	1,645.4
Corn meal.....	9.3	2.4	75.1	19,862	9,017	838.6	216.4	6,671.8
Hominy.....	8.5	.7	79.1	5,532	2,511	213.4	17.6	1,986.2
Farina.....	11	1.2	75.9	2,700	1,226	134.9	14.7	930.5
Macaroni.....	11.8	1.6	73.1	1,007	457	53.9	7.3	334.1
Oat flakes.....	15.8	7.2	68.1	552	251	39.7	18.1	170.9
Oat meal.....	16.8	7.2	66.3	28,345	12,869	2,162	926.6	8,532.1
Rice.....	7.8	.4	79.2	17,412	7,905	616.6	31.6	6,260.8
Crushed wheat.....	12	1.6	74.6	2,971	1,349	161.9	21.6	1,006.3
Wheat flour.....	11.2	1.1	75.2	654,956	297,350	33,303.2	3,270.9	223,607.2
Crackers.....	10.5	12.5	69.1	6,273	2,848	299	356	1,968
Total .....	....	....	....	750,858	340,890	38,203.8	4,902.6	255,522.3
Starches, sugars, etc.:								
Molasses ..	....	....	70	16,779	7,618	.....	.....	5,332.6
Starch, corn.....	....	....	93.8	1,894	860	.....	.....	806.7
Sago †.....	....	....	93.8	1,113	505	.....	.....	473.7

Preliminary Report on Dieteries for Hospitals for the Insane

Sugar.....	.....	.....	100	121,085	54,972	.....	54,972
Syrup .....	.....	.....	70	45,690	20,743	.....	14,520.1
Tapioca .....	.4	.3	87.5	4,050	1,839	7.4	1,609.1
Total .....	.....	.....	.....	190,611	86,537	7.4	77,714.2

Vegetables:

Beans.....	22.5	1.8	59.3	29,159	13,238	2,978.6	238.3	7,850.1
Beans, Lima.	3.2	.3	9.9	840	381	12.2	1.2	37.7
Beans, string.....	2.3	.3	8.9	9,180	4,168	95.9	12.5	370.9
Asparagns	1.8	.2	3.3	2,240	1,017	18.3	2	33.6
Beets	1.6	.1	10.3	90,420	41,051	656.8	41.1	4,228.2
Cabbage	1.4	.2	4.8	143,652	65,218	913.1	130.4	3,130.5
Carrots	1.1	.3	9.2	15,840	7,191	79.1	21.6	661.6
Celery	1	.1	3	4,197	1,905	19.1	1.9	57.1
Corn, early	1.4	.4	8.6	32,100	14,573	204	58.3	1,253.3
Corn, canned	2.8	1.2	19.3	14,800	6,719	188.1	80.6	1,296.8
Cucumbers .....	.8	.2	3.1	19,100	8,671	69.4	17.3	268.8
Egg plant	1.2	.3	5.1	48	22	.3	1	1.1
Lettuce	1	.2	2.5	31,020	14,083	140.8	28.2	352.1
Onions, green topt.....	.5	.1	5.5	22,590	10,256	51.3	10.2	564.1
Onions, late.....	1.5	.4	9.2	31,008	14,078	211.2	56.3	1,295.2
Parsnips	1.3	.4	10.8	22,770	10,338	134.4	41.4	1,116.5
Peas, green	3.6	.2	9.8	5,820	2,642	95.1	5.3	258.9
Peas, canned	3.6	.2	9.8	9,000	4,086	147.1	8.2	400.4
Peas, split.....	24.6	1	62	1,308	594	146.1	5.9	368.3
Potatoes	1.7	.1	14.8	606,608	275,400	4,681.8	275.4	40,759.2
Radishes .....	.9	.1	4	5,500	2,497	22.5	2.5	99.9

† Composition assumed.

Preliminary Report on Diets for Hospitals for the Insane

TABLE V—Willard State Hospital. Total food materials and nutrients, etc.—(Concluded)

KIND OF FOOD MATERIAL	PERCENTAGE COMPOSITION			WEIGHT USED				
	Protein	Fat	Carbo- hydrates	Total weight		Protein	NUTRIENTS	
				Pounds	Kilograms		Kilograms	Fat	Carbohydrates
VEGETABLE FOOD—(Cont'd)	Per cent	Per cent	Per cent					
Vegetables—(Continued)								
Rhubarb .....	.4	.4	2.2	55,080	25,006	100	100	550.1
Rutabagas .....	.9	.1	6	46,090	20,925	188.3	20.9	1,255.5
Spinach	2.1	.3	3.2	18,780	8,526	179.1	25.6	272.8
Salsify†	1.3	.4	10.8	700	318	4.1	1.3	34.3
Squash .....	.7	.2	4.5	19,350	8,785	61.5	17.6	395.3
Swiss chard†	4.2	.6	6.3	23,184	10,526	442.1	63.2	663.1
Tomatoes .....	.9	.4	3.9	48,894	22,198	199.8	88.8	865.7
Tomatoes, canned	1.2	.2	4	5,700	2,588	31.1	5.2	103.5
Turnips .....	.9	.1	5.7	10,560	4,794	43.1	4.8	273.3
Total .....	....	....	.....	1,327,538	602,702	12,114.3	1,366.1	68,817.9
Fruits:								
Apples .....	.3	.4	11.2	112,275	50,973	152.9	203.9	5,709.
Apples, dried	1.6	2.2	66.1	7,466	3,390	54.2	745.8	2,240.8
Cherries	1.1	.8	16.3	130	59	.6	.5	9.6
Cranberries .....	.4	.6	9.9	250	114	.4	.7	11.3
Bananas .....	.8	.5	15.1	900	408	3.3	2	61.8
Currants, red	1.1	.8	16.3	458	208	2.3	1.7	33.9

Preliminary Report on Dietaries for Hospitals for the Insane

Grapes.....	1	1.2	14.4	13,197	5,991	59.9	71.9	862.7
Lemons.....	.7	.6	5.8	2,838	1,288	9	7.7	74.7
Oranges.....	.6	...	7.5	1,836	834	5	...	62.6
Peaches.....	1	...	12.6	6,050	2,747	27.5	...	346.1
Pears.....	.6	.8	14.2	4,650	2,111	12.7	16.9	299.7
Plums.....	.9	...	19.1	3,240	1,471	13.2	...	281
Prunes and plums, dried	1.8	...	62.2	6,360	2,887	52	...	1,795.7
Raspberries, fresh....	1	...	12.6	31,525	14,312	143.1	...	1,803.3
Raspberries, dried....	7.3	1.8	80.2	2,050	931	68	16.8	746.7
Strawberries.....	1	.7	7.3	19,500	8,853	88.5	62	646.3
Raisins.....	2.3	3	68.5	1,000	454	10.5	13.6	311
Watermelon.....	.2	.1	2.7	2,000	903	1.8	.9	24.5
Total.....	...	...	...	215,725	917,939	704.9	1,144.4	15,320.7
Total vegetable food..	...	...	...	2,484,732	1,128,068	51,030.4	7,358.6	417,375.1
Total food.....	...	...	...	4,122,802	1,871,752	109,610.7	129,503.8	435,970.4
Accessories, condiments, etc.:								
Cinnamon.....	...	...	...	247	112	...	...	...
Coffee.....	...	...	...	37,076	16,833	...	...	...
Mustard.....	...	...	...	307	139	...	...	...
Pepper.....	...	...	...	697	316	...	...	...
Peppers, green.....	...	...	...	550	250	...	...	...
Salt.....	...	...	...	52,640	23,899	...	...	...
Tea.....	...	...	...	7,818	3,549	...	...	...
Vinegar.....	...	...	...	24,552	11,147	...	...	...

† Composition assumed.

Preliminary Report on Diets for Hospitals for the Insane

TABLE W
Weights and percentages of food materials and nutritive ingredients used in Willard State Hospital for the Insane, per person per day

KIND OF FOOD MATERIAL	WEIGHTS			Fuel value	PERCENTAGES OF TOTAL FOOD				Fuel value	
	Food material	NUTRIENTS			Food material	NUTRIENTS				
		Protein	Fat			Carbo-hydrates	Protein	Fat		Carbo-hydrates
PER PERSON PER DAY	Grams	Grams	Grams	Calories	Per cent	Per cent	Per cent	Per cent	Per cent	
Beef, veal and mutton	220	32	41	.....	11.7	29.3	31.6	.....	.....
Pork, lard, etc	35	3	17	.....	1.9	2.9	13.1	.....	.....
Poultry	4	1	....	.....	.2	.5	.4	.....	.....
Fish, etc	44	5	2	.....	2.3	4.7	1.7	.....	.....
Eggs	16	2	2	.....	.9	2	1.2	.....	.....
Butter	49	1	42	.....	2.6	.4	32.1	.....	.....
Cheese	11	3	4	.....	.6	2.6	2.9	.1	.....
Milk	367	12	15	.....	19.5	11	11.3	4.2	.....
Total animal food	746	59	123	1,460	39.7	53.4	94.3	4.3	42.3	
Cereals	342	38	5	.....	18.2	34.9	3.8	58.6	.....
Sugars and starches	87	....	....	.....	4.7	.....	.....	17.8	.....
Vegetables	605	12	1	.....	32.2	11.1	1	15.8	.....
Fruits	98	1	1	.....	5.2	.6	.9	3.5	.....
Total vegetable food	1,132	51	7	1,990	60.3	46.6	5.7	95.7	57.7	
Total food	1,878	110	130	3,450	100	100	100	100	100	

CHAPTER 6

PATHOLOGICAL INSTITUTE

The report of the director of the Pathological Institute is herewith appended, but reference is made to the ninth annual report of the Commission, containing the second annual report of the director, which sets forth in detail the objects it is hoped to be attained by the Institute, and the ends to which the work of the Institute is aimed. The Commission has no reason to change its belief in the efficacy of scientific work in the study directed to the causation of insanity its pathology and its cure. This work is of so vast and intricate a nature that it is not within the province of an individual to undertake it or to carry it forward in an effective manner. For many years the several state hospitals have had each a pathological department which has been a part of the expenditure for the maintenance of such hospitals. In some cases separate pathologists have been employed whose time has all been devoted to the scientific study of the pathology of insanity. At the present time in various hospitals throughout the United States and foreign countries pathological departments are maintained, in some instances, at great expense, and yet we maintain, as is asserted by many scientific men, not only in this country but abroad, that New York state is the pioneer in establishing this work upon a permanent basis and upon a system that will attain more beneficial results for the expenditures made than any work of the same nature heretofore instituted. Some complaint has been made with reference to details of the Institute, and manifestly with some degree of reason, for instance, that it is established in New York city where rents are high and not in conjunction with one of the state institutions. When the Institute was created, this matter was given very

Pathological Institute

earnest and careful consideration by the Commission, as well as by medical men best fitted to pass upon the merits of the undertaking. It was agreed that were the Institute to be in conjunction with one of the state hospitals for the insane, it would be removed from a center of population, and would be difficult of access, whereas if it were established in the metropolis, it would be easy of access from the vast number of general hospitals surrounding it, and material from the insane hospitals could be easily brought to it. As shown by the director of the Institute, it should be borne in mind that any effective study of the causation of insanity must be made upon material which has not become disintegrated by destructive processes, such as are found in persons who have been insane for some time. This material is not to be found in the insane hospital, except in a very limited degree, but is to be found in the individual who suffers from those primitive causes that precede the stage of disease which results in alienation of the mind. The various pathological conditions which disrupt the intellect are to be found in all forms of the disordered body, whether its manifestations are of a physical or mental nature. It was therefore considered that the close proximity of the Institute to the general hospitals of New York city was desirable, and the location was selected which would put it in close proximity to them. There were other conditions which determined the location, such as a freedom from interception of light, one of the chief requirements where microscopic studies are called for; hence the upper stories of a high building not likely to be intercepted by other structures was sought. A location that was considered ideal was found, its chief objection being that the rental in this locality, as in all busy parts of the metropolis, was high, yet upon consideration of the requirements of a structure for filling all the needs of an institute, whether built in the city or in conjunction with a state hospital, it was evident would cost a sum which would equal, if not exceed, in the interest upon the first cost the rental determined upon. The Institute receives medical officers from the various hospitals from time to time to prepare themselves for pathological work under

Pathological Institute

direction of the Institute at the several state hospitals, and therefore it was needful that it should be located convenient to the usual living places of such physicians. The Institute also holds a close relation to the profession at large, and it should therefore be located convenient of access, and permitting its easy reach by physicians, which could not be done if it was in conjunction with a state hospital. In the work and studies undertaken at the Institute, the subjects of study are frequently the living individual upon the borderline of insanity, and such it is well known are always fearful of approaching an insane hospital, and could not be had if the Institute was in conjunction with one. There were a multitude of reasons for locating the Institute as it is, all of which considered together make an argument in behalf of its present location, that is quite unanswerable. The professional approval of the work of the Institute by men best fitted to judge its scientific importance is overwhelming and sufficiently authoritative to justify the continuance of the work. The pathology of insanity has been the least progressive of pathological studies, and if the present system adopted by New York gives promise of bearing fruit, its protection and continuance should be engendered by everyone who wishes for a solution to the problem which has been dark for ages, and upon which scientific light is so earnestly desired. In the consideration of the cost of this work, when it is borne in mind that it represents the pathological work of substantially twelve state hospitals, it represents less than was formerly expended per hospital for the same class of work. The present system of pathological work that is now performed is systematized and welded together so that repetition is avoided and whatever work is performed, is under skillful direction tending to a common purpose and so recorded that it is forever available to the student who comes after. The Commission has received abundance of testimony from physicians which justifies it in maintaining its work, and although there have been criticisms, chiefly relating to the character of the work performed, the criticism has usually been from a source which would indicate an individual bias or a

Pathological Institute

personal reason for dissension. The summing up of reviews not only of a system adopted for pathological work in the state but for work actually performed at the present time is so overwhelmingly in its favor that the Commission believes the legislature has ample reason for supporting the Commission in its continued maintenance of the Pathological Institute as now established.

THIRD ANNUAL REPORT OF THE PATHOLOGICAL INSTITUTE

To the State Commission in Lunacy:

GENTLEMEN.—The work of the third year of the Pathological Institute has been continued and extended along the lines indicated in the report of the previous year published in more complete form under the title of the Correlation of Sciences in Mental and Nervous Disease in the Archives of Neurology and Psychopathology, Vol. I, Nos. 1 and 2. The plan of investigating the phenomena of abnormal mental and nervous life under a federation of several sciences as contrasted with the older and quite conventional idea of laying the whole burden of the research on pathological anatomy operating single-handed with the microscope, places the work of the Institute upon a sound and logical basis. This opens the way for real progress in our knowledge of the nature of mental disease and for results that can be turned to practical account.

From the time that the Institute was founded the first and main consideration, taking precedence over everything else, was to clearly define its problems and then to plan the ways and means of solving them. When the great comprehensiveness of these problems is taken into account and the many avenues of science that they reach into is considered, it is not strange that much time was expended in defining these problems.

The ideal aim of the Institute in this unity of several branches of science is to direct the investigations for a purpose; to the solution of problems rather than for the accumulation of data. To carry out this aim it was not simply a matter of collecting

Pathological Institute

several departments of research under a common roof. Without some key to the nature of abnormal mental life, without some guiding principles these departments could not be used co-ordinately and for a common purpose. The most important work of all that has been accomplished in the Institute is the formulation of certain generalizations of the phenomena of abnormal mental life to serve as guides for the work of the several departments. These principles were worked out only by co-ordinating a study of the psychic phenomena with the concomitant physiological processes in the neuron according to the psycho-physiological postulate of psychology and psycho-pathology.

Criticism has appeared to the effect that these principles and theories guiding the work of the Institute have been rather generally and vaguely stated in the previous report. This criticism is perfectly natural, for one cannot expect to have ideas and theories accepted when their sources, verifications and the methods by which they were wrought out are not explained. We could not, however, forestall nearly the whole work of the Institute in explaining the basis and verification of these theories in this report. We could merely state them compactly as our working hypotheses and show that they act as mentors for determinate research, as against voluminous fact gathering, which, though useful to science, does not in itself constitute science. The results of researches in several of the departments extended along the lines suggested by these ideas, show them to be sound and efficient as working hypotheses. In fact, the results wrought out under the guidance of these hypotheses have far exceeded our first anticipations, for the theories have withstood the severe test of practical application in the direction of psycho-therapeutics. It appears that the importance of these general principles, as, for instance, the theory of neuron energy and its concomitant psycho-motor manifestations, the theory of neuron retraction and concomitant dissociation of consciousness, the explanation of the slow death of the neuron hinging on the interpretation of the mataplasm granules, have not been fully appreciated because their bases were not discussed. In view of this I would beg to call your

Pathological Institute

attention to the fact that papers devoted to the consideration of the data and methods underlying these hypotheses and to other researches suggested since their formulation form sufficient material to occupy two years issue of the official organ of publication, the Archives of Neurology and Psychopathology. All this material, practically ready for publication, is independent of other work in the Institute along collateral lines and also the researches from the hospitals. The work of the Department of Psychology and Psychopathology has grown so extensively that I would beg to call your attention toward providing an assistant for this branch of work as a really urgent matter. Otherwise the vantage ground already gained by this department is in danger of retrograding.

In connection with this department, and in fact the whole Institute, the necessity of a psychopathic hospital for the investigation of the early phases of mental disease becomes every day more apparent. It is truly remarkable in a great metropolis like New York that provisions are made for the study, care and treatment of all manner of disease except the early phases of insanity. People thus afflicted have to forego the most precious opportunity of recovery and allow the malady to go on until it reaches the stage of commitment to the asylum. This singular state of affairs shows that much remains to be done even in our already highly perfected system of care for the insane. Provision for this class of cases collects the phenomena, the study of which affords the great keys for the understanding of abnormal mental life. The study of these cases is invaluable for the progress of our Institute and its future home should be in the principal psychopathic hospital and clinic of New York city. That the public are ready and waiting for such a hospital is evidenced by the fact that within the past year ten patients, hearing of the psychopathological department of this Institute, have presented themselves for scientific investigation in the hope of accomplishing something toward the alleviation of their condition.

Interesting problems are being investigated in all of the other departments of the Institute, but these investigations because of

Pathological Institute

their more technical nature are not well adapted for explanation in a report of this character. The appropriate place for their presentation is in the organ of publication of the hospitals and Institute. In the Department of Comparative Neurology the homologues of the cranial nerves are being studied in fishes. In Physiological Chemistry the question of the autotoxic basis of mental disease is under investigation. Another series of studies in this branch relates, although indirectly, to the nature of the metabolism of the neuron. Anthropological investigations are being carried out among the children in one of the large reformatories in the city, and also in a collection of feeble-minded children. In the Department of Bacteriology a series of observations on the relation of certain bacteria to forms of meningitis are approaching completion. Patho-anatomical researches are directed toward a great variety of mental and nervous diseases with special reference to the morphological changes in the neuron accompanying defective nutrition and the action of toxic agents. This branch of work is very seriously restricted from the great difficulty of obtaining autopsies soon enough after death to eliminate the occurrence of post-mortem artifacts in the nerve cells. Unless an autopsy can be performed within three to five hours after death, and in some cases even earlier, the material, no matter how valuable for the solution of a problem, is not reliable for study on account of these post-mortem changes. We have had to discard fully seventy per cent. of the cases presented for autopsy on this account. This question is really so serious that the laws governing the disposal of dead bodies should be amended in favor of early autopsies.

During this coming year it seems quite urgent to have an associate in experimental pathology and pathological physiology. In addition to working out his own problems with regard to the nervous system, all of the other departments are greatly dependent upon his aid in animal experimentation. Provisions for experimental work on animals are even now inadequate for the present needs of the Institute. We have, however, not been dis-

Pathological Institute

posed to urge better facilities in this work until the appointment of this associate may be approved.

The Department of Normal Anatomy and Histology of the Nervous System is not yet established, although many brilliant researches fall within its scope. For the present, however, work in this field can be accomplished by associates in other departments as it meets with the requirements of their problems.

The unfortunate death of Dr. Arnold Graf, Associate in Biology, leaves this department without guidance. It will be difficult to find a successor who will be able to apply to the problems of the nerve cell a range of thought such as this gifted investigator in biology and cytology possessed.

The use of the library as a centre of reference for the combined benefit of the hospital is gaining ground. At the suggestion of the president of the Commission, a list of the journal articles in the field of neurology and psychiatry is sent to Albany each month to be manifolded and distributed to the hospitals. Since this custom has been inaugurated there has been an increasing demand from the hospitals for references to the current literature. An abstract of the librarian's report for the year shows that there have been received:

99 volumes, at a total cost of.....	\$298 46
75 journals, at a total cost of.....	476 26
9 pamphlets	4 47
Total cost of binding for the year.....	126 65
<hr/>	
Total expense of library for the year.....	\$885 84
<hr/> <hr/>	

Appended is the financial statement for the year.

Respectfully submitted,

IRA VAN GIESON.

Pathological Institute

EXPENDITURES AT THE PATHOLOGICAL INSTITUTE OF
THE N. Y. S. H. FOR THE YEAR ENDING SEPTEMBER
30, 1898.

Estimate 1. Salary	\$5,000 00
Estimate 2. Wages	12,997 84
Estimate 8. Maintenance	496 29
Estimate 8. Equipment	885 84
Estimate 10. Maintenance	659 41
Estimate 10. Equipment	4,111 25
Estimate 11. Maintenance	11,722 27
Estimate 11. Equipment	2,436 61
	<hr/>
	\$38,309 51
	<hr/>

MAINTENANCE.

Ordinary expenses (salaries, wages and perishable supplies)	\$30,863 58
Ordinary accessories to equipment, i. e., instruments, books and journals....	4,136 42
	<hr/>
Total maintenance (ordinary expenditure) for the year	\$35,000 00
Extraordinary expenditure for equipment.....	3,309 51
	<hr/>
Total	\$38,309 51
	<hr/>

CHAPTER 7

RESULTS OF TREATMENT

Attention is particularly called to the data presented in Table No. 5, showing results of treatment in the presumably curable cases for the current year. In this table an effort is made to bring together under a proper classification all those cases that are considered amenable to treatment with a view to recovery. The classification is a broad one, distinguishing only by division into the two principal types of emotional depression, often known as melancholia, and emotional exaltation, which included various forms of mania; and puts all other manifestations of curable insanity in a single class by themselves. At the close of each fiscal year an estimate is made up, based on careful examination of those patients still under treatment who are presumably curable, as, for instance, at the beginning of the last fiscal year there were 829 cases of melancholia, 468 cases of mania, and 126 of all other curable forms of insanity under treatment. During the year there were admitted to the state hospitals 1,219 cases of acute melancholia, 715 cases of acute mania, and 184 cases of acute insanity of all other forms, or a total of 2,118 curable cases. At the close of the year there remained 985 cases of melancholia, 518 cases of mania, and 175 cases of all other forms of acute insanity whose recovery can reasonably be anticipated. Of these patients there were discharged during the year as recovered, 561 cases classified as of melancholia, 388 classified as of mania, and 53 patients suffering from other forms of curable insanity, or a total of 1,002 cases. The ratio of recoveries is usually based upon the number admitted during the year, and taking this proportion as the basis, it will show the marvelous result of 48 per cent. of recover-

Results of Treatment

ies from those patients who presented a reasonable hope of recovery. In a former chapter the percentage of recoveries based upon the total number of primary admissions is given, but it is evident that many of these cases presented no hope of recovery at the time of admission, and it would be obviously unfair to reckon results of treatment upon a basis which includes such cases. A proper estimate of results can only be based upon a class of cases amenable to treatment; and, as shown above, such a ratio applied to the state hospitals shows the recovery of approximately one-half of such cases, assuming that at the close of the fiscal year the number of this class of patients remaining under treatment bears a fair proportion to the number present at the beginning of the year. The data contained in Table No. 5, moreover, shows the number admitted for the first time as well as those who had previously recovered one and two times. Thus 208 recovered cases who had previously recovered were admitted during the year, and 61 who had made two previous recoveries. To assume that a patient who has made three recoveries becomes a remittent case, or is liable thereafter to periodical attacks of insanity, and cannot fairly be claimed to again recover, although many of these cases do make a recovery that has a reasonable duration, would be mere empiricism. The figures show that the patients discharged during the past year who had previously been discharged recovered had an average interval of immunity of 11 years and 9 months, whereas in the case of those who had made two previous recoveries, the average was 9 years and 8 months. In ordinary bodily diseases treated at general hospitals where the lapses are common and one attack often predisposes to another, it is usual to consider cases that have recovered from the then present attack as recoveries, and, as before stated, this rule has been applied to insanity up to three recoveries. Out of the number of curable cases present at the beginning of the year added to those admitted during the year, that come within the classification under discussion, making a total of 3,539 such cases under treatment during the year, 255 died, showing a mortality from this class of approximately 7 per

Results of Treatment

cent, and the remainder were transferred to other groups, or, in other words, have passed into the classification which is known as chronic, and are presumably incurable. The figures herewith given are fairly reliable and eminently instructive, and if statistics could be universally based upon these divisions, results could be accurately attested, and comparisons made between hospitals and between different states and countries would show fairly well the results obtained by treatment. The great object for which our hospitals are founded is the recovery of the insane, bringing them back to a state of mind and body which will permit them to go back to their homes, or to engage in useful occupation, relieving the state from their care and maintenance. In addition to the number here given as discharged recovered during the year, many other patients discharged as improved, or in a condition to reside with their family, were not technically rated under the head "discharged recovered." The state has been relieved from the care of these cases, but not all of them have been taken from those patients who have been considered in this chapter as presumably curable; many of them are from the class of cases known as chronic, belonging to one or other of the groups covered by this term. It is probable that some of these cases will ultimately return to the care of the hospital, no doubt in much greater proportion than of those who have been discharged recovered, but experience proves that a large proportion of these cases remain out of the hospital and continue in a fair mental condition. The improved condition of these patients is unquestionably a result of their enlightened treatment, and should enter into a consideration of general results of treatment. If they had not been subjected to skilled observation and the care of trained nurses, and to all of those curative processes which enter into the treatment of the insane, they probably would have remained in a condition requiring continued maintenance in institutions, and thus would have been a constant burden upon the state. Hence they should be considered a part of the relief which the state experiences as a result of the present humane and intelligent treatment accorded to the insane.

CHAPTER 8

THE CAPACITY OF THE STATE HOSPITALS

One provision of chapter 636, laws of 1898, is that "The Commission shall determine, from time to time, the capacity of each of the state hospitals, and shall incorporate a statement of such capacity in its annual report to the legislature." In accordance with this provision, the Commission herewith reports the present capacity of the several state hospitals, and the total capacity for all classes of the insane of all the buildings used for them throughout the state. It does not include construction that has not yet been so far completed as to permit of furnishing or occupancy by patients. In determining this capacity the Commission tentatively has accepted in a very large degree the formal certification of capacity made by the boards of managers. Chapter 545 of the laws of 1896, known as the Insanity Law, did not require such certification, but what is known as the state care act required the managers to certify the capacity of the several state hospitals. In considering this question, many elements enter to modify any standard that could be adopted, based upon either floor or cubic space. It has been impossible for the Commission to act upon any such standard since the great question as to space has been the supply of pure air in sufficient quantities for purposes of health. This is particularly applicable to sleeping rooms or dormitory space, and in fact for this purpose it may be said that there is no physiological standard. An unwritten code has been in vogue for many years relative to air space, which demands 1,000 cubic feet per patient. Although it does not take into account any question of change of air, yet it is well known that facilities for changing the air modify in a very large degree the actually necessary enclosed space used for patients.

The Capacity of the State Hospitals

If the air is frequently changed by proper ventilating apparatus, a smaller space can be used with entire physiological safety. In nearly all of the state hospitals ventilation of sleeping rooms has been amply provided for, although the conditions that prevail are not uniform. In some institutions it is possible to change the air in rooms very frequently, in some instances as often as once in every fifteen minutes. This, however, is needlessly frequent. In recent construction the aim has been not to provide for air changes oftener than necessary, and where at least 500 cubic feet of space is allowed per patient, this has been fixed at once each half-hour. In comparing the conditions that exist in the state hospitals with respect to ventilation with the ordinary dwelling house occupied by the working class, there is no doubt that even in the older hospitals a better sanitary condition prevailed. It is quite common in the usual dwelling house for two persons to occupy a bedroom 12 x 14 feet in size, with an 8 or 9-foot ceiling, with closed windows and doors, consequently without any perceptible air change, and yet with a continuance of good health. It is doubtful whether any such conditions prevail in any state hospital at the present time. Some provision is universally made for the ingress of pure air and the egress of foul air, even when there is no artificial appliance to compel the change of air, and when the ordinary currents are facilitated only by the weight of the atmosphere as affected by varying temperature. Hence in a hospital dormitory which without proper ventilation might appear to be crowded beyond the safety line, its sanitary state may be much better than that of the ordinary sleeping room, with no adequate provision for ventilation. It stands to reason that a room in which the atmosphere is changed half-hourly may be but a fraction of the size of a room in which the air undergoes no change, and yet be much more satisfactory in a sanitary sense. The question of ventilation, therefore, has a very forcible bearing on the question of space, and this has been considered in determining capacity. The three ordinary requirements of space for the insane are: 1st, the sleeping room; 2d, the day-room, or the room occupied during say 15 or

The Capacity of the State Hospitals

16 of the 24 hours, and 3d, the dining and service rooms. In recent construction for the insane the State Architect has followed the rule of 50 feet of floor space per capita for dormitory purposes, the same for day-room purposes, and 10 feet per capita for dining-rooms. This rule is occasionally changed, but the capacity of the later built buildings has been largely based upon it. This gives a total of 110 feet of floor space for all purposes, except toilet, bath-room and service rooms. The following table gives the capacity for each state hospital, and it makes a total capacity for 20,656 patients, leaving for the number of patients actually in custody a deficiency of 189.

Utica	1,111
Willard	2,277
Hudson River	2,047
Middletown	1,301
Buffalo	1,873
Binghamton	1,333
St. Lawrence	1,442
Rochester	480
Long Island	3,538
Manhattan	4,925
Collins	329

As above stated, buildings in course of construction not advanced to a point for furnishing are not included in this statement. At Central Islip there are three pavilions with a capacity for 225 patients that will be ready for patients within seven months, and at the same branch of the Manhattan State Hospital a building is in course of construction for 2,260 patients, the use of which cannot be anticipated before 1900. At Ward's Island, a building for the treatment of acute cases is in course of construction to accommodate 320 patients, the use of which may reasonably be anticipated in a year from the present writing. At Binghamton, changes are being made which will increase the capacity of the hospital 90 patients, and this number

The Capacity of the State Hospitals

is not included in the statement. At the St. Lawrence State Hospital structures for 200 patients, not included in the present certification will be completed during the coming year. Of course, it should be borne in mind that this statement includes the buildings now occupied by 839 patients on Blackwell's Island, which must be vacated and turned over to the city of New York in about two years; also the buildings at the Brooklyn department of the Long Island State Hospital, at Flatbush, for 1,119 patients, which the present agreement with Kings county requires vacating within two years, although the State has the option of continuing the use of this building for five years longer. It will thus be seen that with the completion of the buildings now in course of construction accommodations for the insane will nearly equal the population of the hospitals on October 1, 1900, but as the average annual increase of the insane is about 700, and as it requires at least two years to build and complete new structures, there will be 1,400 more patients to provide for within two years, making the total deficiency 641. It would be desirable, if it were feasible, to certify a smaller capacity than is here given for the several hospitals, but the strenuous effort that has been made to provide for all the insane and the evident progress that has been made toward this end, with the prospect of accomplishing it within a few years, furnish a sufficient justification for the present certification. In any event all the committed insane must be provided for in the present buildings without regard to their certified capacity, and it is gratifying to believe that the customary crowding of patients in our institutions has never been so free from embarrassment as at the present time. It is a fact that in nearly every state and country at the present time more patients have to be provided for in existing buildings than such buildings were intended to accommodate. In this provision for the dependent classes generally is deficient, but it is historically true that the insane have been less adequately provided for than any other dependent class. If the legislature continues for a few years longer to support the Commission in its effort to provide accommodations for the

The Capacity of the State Hospitals

insane, as liberally as it has done for several years past, the Commission believes that the capacity of the state hospitals on the basis of the present certifications will correspond with the number of the insane to be provided for. When this most desirable result is attained, then we may expect to secure a suitable amplification of the space needed by them, and may hope to obtain for the acute insane that opportunity for specialized care which is greatly to be desired, but with present means is unattainable.

CHAPTER 9

MEDICAL SERVICE IN STATE HOSPITALS

It is with a large measure of gratification that the Commission refers the legislature to the reports of the several hospitals, contained in volume 2, especially to the reports of the medical superintendents, which deal largely with the more detailed administrative work of the hospitals. Comparing these reports with similar reports in past years, it will be observed that more attention is paid to the medical treatment of patients and that the clinical work is emphasized in a greater degree. Attention is now paid to the bodily requirements of patients in a greater degree than heretofore. Each institution receives periodical visits from an ophthalmologist, skilled in the treatment of the eye and a large number of patients have been treated successfully as to their eyes, adding not only to their personal comfort but aiding in their ultimate recovery by the removal of the irritation which arises from imperfect refraction as well as other visual defects. In the same way dentists are employed to treat the teeth of patients, which is a new departure, and as the Commission believes a progressive one, supplying a needed and salutary service for the insane. The clinical service of the hospitals has been increased by physiological laboratory work, which enables the medical officers to examine the various secretions of the body, both chemically and microscopically, and to determine such hygienic changes as are indicated by the bodily fluids and excretions. As an instance, it is now the rule with all patients admitted that where indications exist to warrant it, a critical examination of the blood, of the urine, and sometimes of the cerebro-spinal fluid and contents of the stomach is made. Examinations of the bodily secretions are also made for micro-organisms, and where infective organ-

Medical Service in State Hospitals

isms are discovered, desirable isolation is provided. Within the past year methods of recording clinical observations have been perfected, so that a mass of results of daily experience is accumulating at the hospitals in a form to be made readily available for future studies of the diseases to which the insane are subject. The value of this medical work cannot be overestimated, and in practical use the fact that the system now in vogue is of a uniform character, making accurate comparisons possible, is a great help to the clinical observer, enabling him to do more and better work, and redounding to improved methods of treatment and, as the statistics of this report will show, to an increased number of recoveries. The state hospitals are co-operating with the Pathological Institute in studying the effects of various treatments (and at the present time more particularly of treatment modifying metabolism of the body). Equipment has been furnished to the several hospitals to give them ample facilities for research wherever it has been required, and it is gratifying to learn that physicians at large, especially in the communities where the hospitals are located, are appreciating the advanced medical service in the hospitals, and are taking advantage of the experience there obtained. The hospitals have opened their doors to the profession at large for purposes of examination of the medical work done and for conferences, with a result mutually advantageous. Heretofore there has been too great a separation of interests between the special medical work in insane hospitals and that of the physician in general practice, but present tendencies are drawing them closer together. When specialists in our state hospitals and outside physicians are united in a common bond of interest it is to be hoped that earlier skilled observation will be given to the insane, and many cases at present unrecognized in the first stages of their curable state will receive enlightened treatment that may prevent the progress of their disease to a degree which overthrows the intellect. Another marked advance in the medical work of the hospitals is found in the formal conferences that have been instituted be-

Medical Service in State Hospitals

tween the superintendent and his staff as a body, in some instances daily. At these conferences the medical work of the day is reviewed, and each physician receives the benefit of the discussions which ensue, and becomes en rapport with the whole medical work of the institution.

CHAPTER 10

MONTHLY CONFERENCES

Section 37 of chapter 545 of the laws of 1896, constituting chapter 28 of the general laws and known as the "Insanity Law," provides as follows:

"The superintendents of the several state hospitals, or their representatives, including the general superintendents of the Long Island and Manhattan State hospitals and, in the discretion of each board of managers, one member of each board to be designated by it, shall meet at least once in every month, on a day to be appointed by the Commission at the office of the Commission at Albany, or at such other place as may be designated by it, to consult with such Commission with reference to matters relating to the care and maintenance of the state hospitals and particularly with reference to the purchase of supplies for their use."

These conferences were evidently intended to be devoted to the consideration of administrative work and to effect a unity of action on the part of the several hospitals in methods of administration, the selection of the best means of accomplishing the purposes for which the hospitals were created, and in securing the best results in the purchase and use of supplies. The medical service and questions connected therewith, although not outside the scope of these conferences, are considered more appropriate for the medical member of the Commission to discuss at his several visits to the state hospitals with the medical superintendents.

The conference includes each member of the Commission, the medical and general superintendents of the state hospitals, and

Monthly Conferences

each board of managers may have a representative. Medical questions and the medical service do, however, enter into the proceedings at times, as the minutes of these conferences will show.

The results of these monthly conferences have subserved the interests of the state in the matter of economical purchases and the use of supplies and improved administration. The proceedings show perhaps more in detail what efforts have been made, not only by the Commission but by the superintendents in improving the condition of the hospitals than could be shown in any other manner, and the Commission deems them of sufficient interest to report them, although all extraneous and surplus matters are omitted. In other words, the reports of these conferences are carefully edited so as to somewhat reduce the amount of printed matter. Reference may always be had to the original stenographic reports, which are on file in the office of the Commission.

The consensus of opinions of a majority of the superintendents is a sufficient basis upon which to found a conclusion upon almost any subject connected with the administration of the hospitals. The proceedings give an amount of detailed information that may be of interest to the legislature and to the public relative to the internal affairs of the hospitals, and about which there is sometimes a considerable misapprehension.

STATE HOSPITALS—NOVEMBER ESTIMATES—1897

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held October 29, 1897.

Present—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. L. Russell, M. D., first assistant physician; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hos-

Monthly Conferences

pital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., acting general superintendent; Manhattan State Hospital, E. C. Dent, M. D., medical superintendent, Female Department, Ward's Island.

Commissioner Wise, chairman.

Dr. Talcott moved that the report of the committee on crockery and glassware, submitted at the last conference, be accepted and adopted, with the amendment that the committee in receiving proposals be permitted to consider semi-vitreous ware and that the committee be authorized to make such selections and suggestions as it deemed best, with authority to enter into contract. Carried.

Dr. Mabon moved that a committee of one be appointed with power to investigate the matter of insurance on the boilers of the State hospitals and to receive proposals therefor. Carried.

The Chairman appointed Dr. Howard as such committee.

Dr. Pilgrim moved that Auditor George D. Sanford be instructed to divide pro rata the quantity of toweling remaining undelivered under the contract with Jaffe & Pinkus according to the number of patients in each hospital, and that the hospitals at once estimate for their respective proportions, in order that the contract may be closed. Carried.

Commissioner Brown stated that the Commission would send out a circular letter requesting the hospitals to state in the estimates monthly in connection with the respective items the quantity of farm and garden products in stock and the estimated production thereof, which would be available for the use of the hospitals during the coming month.

Dr. Howard moved that the Utica State Hospital obtain from the Library Bureau a stock of library cards, and that the sev-

Monthly Conferences

eral hospitals order their supplies thereof from the Utica State Hospital. Carried.

Mr. Wells, representing the Brown Insecticide Co., of Syracuse, N. Y., addressed the conference relative to the merits of the insect exterminator manufactured by that company.

Commissioner Brown submitted to the conference a comparative statement of the expenditures according to treasurers' reports of the various hospitals under estimates 3 and 4 for the nine months ending June 30, 1897, showing the wide discrepancies which prevailed.

President Wise stated that he should prepare a comparative statement of this nature covering the twelve estimates, and that the various hospitals would be furnished with copies thereof.

Commissioner Brown stated that the Commission would hereafter allow a per capita of \$0.03 per week or \$1.56 per year per patient for fresh and dried fruits.

Dr. Hurd suggested to the Commission that it would be more convenient for some of the superintendents if the monthly conference, instead of being called at 2 p. m., were called about forty minutes later.

President Wise stated that the matter would be considered by the Commission.

On motion of Dr. Talcott, adjourned.

STATE HOSPITALS—DECEMBER ESTIMATES—1897

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held November 29, 1897:

Present—Commissioners Wise, Brown, and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. L. Russell, M. D., first assistant physician; Hudson River State Hospital, D. Porter Lord, steward; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W.

Monthly Conferences

Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., acting general superintendent; Manhattan State Hospital, Percy Bryant, M. D., medical superintendent, Male Department, Ward's Island; J. H. Osborne, manager, Willard State Hospital.

Commissioner Wise, chairman.

Reports.—Dr. Mabon submitted the report of the committee on crockery and glassware.

REPORT OF COMMITTEE ON CROCKERY.

To the Commission in Lunacy and the Conference of Superintendents:

Gentlemen.—Your committee on crockery begs leave to submit the following report:

In a preliminary report we stated certain conclusions we had reached and the changes recommended. A further investigation has led us to modify these recommendations, as to the kind of ware and the stamping of the same

We will first give a general report of the work performed by the committee, and then will enter into the details as finally recommended.

First we endeavored to follow the original report of the committee on crockery as made under date of July 17, 1895, as nearly as possible. We divided the articles needed into two parts, crockery and glassware, and considered each separately. We found a disinclination on the part of the potteries to treat with us directly, especially those making vitreous ware. We then invited a proposition from a pottery making semi-vitreous ware, and investigated its merits.

We held three meetings when the full committee were present and one which the chairman was unable to attend.

Revision of the first report, under date of July 17, 1895:

Monthly Conferences

Plates.—Two sizes may be used. For all general uses the 7 inch size, so called, measuring about 9 1-8 in. in diameter will be used, and for special uses, the 5 in., measuring about 6 in. in diameter may be used. Half thick.

Bowls.—Size 30s footed, oyster, thick. (As price is same, half thick may be used if desired.)

Dishes.—(Platters.) Three sizes, 11 in., 14 in., 16 in., so called, half thick. (Larger size to be used only in limited numbers and under unusual conditions.)

Jugs.—Three sizes may be used: 36s, 24s, 6s, or about 1 qt., 2 qt. and 4 qt. capacity.

Individual butters.—Two and a half inches in diameter, thick.

Butter dishes.—Covered butter dishes without strainers to be used for some of the best tables.

Fruit saucers.—Round, 4 in., measuring about 4½ in., half thick.

Covered dishes.—Nappies, 8s and 9s, measuring about 8½ in. and 10 in., round, half thick, with planished metal covers, instead of oval vegetable dishes.

Cups and saucers.—One size to be used for both tea and coffee, unhandled, half thick, Saxon tea cups which will not nest. The capacity of a Saxon tea cup is 8 oz. If necessary, a cup of some shape may be made which will hold less.

Chambers.—Size 9s, unhandled, straight sides, round corners, no covers.

Soap slaps.—Plain oblong shape.

Sauce or gravy boats.—Oblong shape, plain, unhandled. Really small tureens without saucer. Small jugs may also be used for this purpose.

Mustards.—Plain, without handles, cover with opening for spoon.

Ewers and bowls.—Size 12s recommended.

Sick feeders.—Left for superintendents to decide.

Spittoons.—Left for superintendents to decide.

All articles of crockery, except jugs, should be without handles. It is not practicable to have each article marked as the cost would be materially increased thereby.

Monthly Conferences

We have had correspondence and personal interviews both with manufacturers and dealers, those whom we believed were in a position to supply us with what we needed. As a result, we received definite propositions from representatives of Knowles, Taylor & Knowles Company of East Liverpool, Ohio, The Greenwood Pottery of Trenton, N. J., The Onondaga Pottery of Syracuse, N. Y., and the Mayer Pottery Company of Beaver Falls, Pa.

There are some variations in the sizes, etc., of the different articles as made by these concerns, but we have tabulated their bids on as nearly a uniform basis as practicable.

The table is as follows:

	Knowles, Taylor & Knowles.	Mayer Pottery Co.	Greenwood Pottery.	Onondaga Pottery.
Dinner plates, 7 in.....	\$0 65	\$0 60	\$0 63	\$0 90
Bowls, 30s	85	64	83	85
Dishes, 11 in., platters.....	1 25	80	1 20	2 64
Jugs, 30s.....	1 25	96	1 22	2 00
Jugs, 12s.....	2 55	1 92	2 49	4 50
Jugs, 4s.....	5 50	4 32	5 36	....
Individual butters.....	16½	16	16	30
Covered butters	3 50	2 60	3 41	4 50
Fruit saucers, 4¾.....	30	24	30	50
Tea cups and saucers, no handles	40	37½	39	45
				w g
Open chambers, no handles...	3 50	2 50	3 41	2 54
				w g
Soap slabs, no drainers.....	88	48	86	50
Sauce boats, no handles.....	2 50	....	2 44	3 00
Nappies, 8 in.....	1 75	1 44	70	2 00
Nappies, 9 in.....	2 38	1 92	2 28	3 00
Mustards	75	70	69	1 00
				w g
Ewers and basins, 9 in., plain.	8 25	6 08	8 05	3 80
Sugars, 30s, no handles.....	1 88	1 75	1 82	2 40
	=====	=====	=====	=====

Monthly Conferences

It will be seen that the Onondaga Pottery Co. was the highest bidder and the Beaver Falls Co. the lowest.

As regards the quality and the market value of the samples submitted, we believe, from information gathered and our own inspection, that the Onondaga Co. furnish the highest class of ware, but their prices are likewise so high that they prohibit the general use of this ware in our State hospitals, as seemingly too extravagant. As regards the merit of the Knowles, Taylor & Knowles and the Greenwood ware, the evidence was conflicting. It was finally decided that as the Mayer Pottery Co. presented the lowest bid their ware should be investigated with a view of adoption, if suitable. The appearance of this ware as well as the price is in its favor. The question of its durability is the most important point. In regard to this we consulted with Dr. Blumer of Utica Hospital and Dr. Wagner of Binghamton Hospital, both of whom stated that the ware received from the Mayer works had proved very durable and eminently satisfactory to them. While the ware used by them was not exactly the same in design as the sample line under investigation, still the recommendations were considered by your committee as proof that the quality was satisfactory.

A meeting was arranged with the president of the Mayer Pottery Co. in New York city and all details relating to his ware were discussed. He presented the following proposition:

BEAVER FALLS, PA., November 22, 1897.

Dr. WILLIAM MABON, *Chairman Committee on Crockery:*

Dear Sir.—We propose to supply the various New York state hospitals with such semi-vitreous china as they may require for use for one year from the signing of the contract for the following net prices and terms, viz.:

Plates, 7 in. flat, thick.....	\$0 60	per dozen
Plates, 5 in. flat, thick.....	44	"
Oyster bowls, 30s,	54	"
Dishes, 11 in. regular.....	1 92	"
Dishes, 14 in. regular.....	3 36	"

Monthly Conferences

Dishes, 16 in. regular.....	\$5 28	per dozen
Jugs, 36s, regular.....	80	"
Jugs, 24s, regular.....	1 12	"
Jugs, 6s, regular.....	2 88	"
Individual butters.....	16	"
Covered butter bottoms.....	1 74	"
Covered butter covers.....	86	"
Fruit saucers, 4 in.....	24	"
Tea cups, unhandled.....	37½	"
Tea saucers	37½	"
Chambers, 9s, uncovered and unhandled.....	2 50	"
Soap slabs.....	48	"
Sauce boats.....	1 28	"
Nappies, 9 in.....	1 92	"
Nappies, 8 in.....	1 44	"
Mustards, covered and unhandled.....	70	"
Ewers, 12s.....	2 50	"
Basins 12s	2 50	"
Sugars, unhandled and covered.....	1 75	"

The ware to be good standard selection; packages to be charged at regular standard prices, viz.:

No. 1 and 2 casks.....	\$1 75	each
No. 3 casks.....	1 50	"
No. 4 casks.....	1 25	"
No. 5 casks.....	1 10	"
No. 6 casks.....	90	"
No. 7 casks.....	75	"
Barrels.....	35	"

Goods to be delivered by us free on board cars at Beaver Falls, Pa. Terms, thirty days net from date of shipment, or if preferred by you, payments may be made on or before the fifteenth day of each month, for the shipments the previous month.

The shapes and sizes of ware to be the same as samples shown your committee in New York city, with the following exceptions, viz.: We agree to change the shapes and carry out the wishes of your committee with regard to the following articles, viz.: Tea

Monthly Conferences

cups, chambers, sauce boats, mustards and covered butters. We agree to furnish each institution with a piece of each kind of ware labeled to enable them to order by.

Deliveries to be made with reasonable promptness and in such quantities as may be required by each institution. Contract to be subject to strikes, accidents or causes beyond our control.

Respectfully submitted,

THE MAYER POTTERY COMPANY, LIMITED.

(Signed) JOSEPH MAYER, *Chairman.*

Your committee accepted this proposition subject to ratification by the conference, and recommend that the contract be drawn up without delay. An increase of wages will be made by the potteries on January 1, 1898. Other firms ask higher prices after that date.

Beaver Falls is in the western part of Pennsylvania and the freight rate to most of the hospitals will not be more than from New York city. As there are no standard packages in the crockery trade, it is impossible to give directions as to the exact number of articles that should be ordered at a time, but any number ordered will be shipped in the most economical manner.

The contractor should be required to furnish each institution with a sample set of all the articles named in this contract, properly labeled, which shall be kept for comparison with the shipments. The contractor should be required to manufacture these articles in such quantities that there may be no unnecessary delays in filling the orders of the different hospitals. In making this contract it is understood, and should be so stated in the contract, that we are not bound to take any specified quantity of crockery, but that the orders shall only be for such quantities as we may actually need from month to month, it being entirely in the discretion of the hospitals as to the quantity ordered. We believe that this proposed contract will conserve the best interests of the state.

Planished covers for nappies. Manning, Bowman & Co., 35 Warren street, New York, offer to supply us with what covers we need at \$4.30 per dozen. We recommend that this offer be

Monthly Conferences

accepted without making a formal contract, as the quantity which will be used is not large.

GLASSWARE.

Tumblers.—Strong, white, flint glass tumblers with straight sides, $3\frac{1}{2}$ in. x $2\frac{1}{2}$ in., ground bottom, plain or fluted bottom.

Water bottles.—Heavy, glass water bottles, holding about two quarts, instead of pitchers, for water.

Vinegars.—Glass bottles with glass stoppers.

Syrup jugs.—Glass with metal top, handled.

Cracker jars.—Glass jars, straight sides, glass covers.

Celery glasses and spoon holders.—Heavy glass.

Water bottles, vinegars, syrup jugs, cracker jars, celery glasses and spoon holders should be of uniform style.

Salts and peppers.—Strong, restaurant style.

We have had correspondence with the following firms in relation to supplying us with glass: United States Glass Co., McKee Bros., Rochester Tumbler Co., all of Pittsburg, Pa., S. B. Pierce's Sons of Syracuse, N. Y., and Fostoria Glass Co., of Moundsville, W. Va.

We received propositions as follows:

	Fostoria Glass Co.	United States Glass Co.	McKee Bros.
Tumblers	\$0 25 doz.	\$0 45 doz.	\$0 30 doz.
Medicine tumblers	25 "	.....	.....
Water bottles	2 50 "	2 25 "	2 50 "
Vinegars	1 15 "	2 50 "	1 25 "
Syrup jugs	1 25 "	2 25 "	1 50 "
Cracker jars	2 75 "	4 00 "	1 00 "
Celery glasses	1 10 "	1 75 "	1 25 "
Spoon holders	60 "	85 "	65 "
Salts and peppers	63 "	1 25 "	1 00 "

We found it rather difficult to find articles of glassware which were peculiarly suited to our use. No one manufacturer could be found who made the full line we desired. Therefore the above propositions were based on such different articles that comparison of prices only would be misleading. After careful consideration and examination we selected two lines which would be suitable, one made by the United States Glass Co. of Pittsburg, and one

Monthly Conferences

by the Fostoria Glass Co. of Moundsville, W. Va. These samples were examined by the committee at the respective agencies of the companies in New York.

The line made by the United States Glass Co. was, all things considered, of more uniform and attractive style.

The line made by the Fostoria Glass Co. can be furnished at the following prices:

Tumblers, plain	\$0 25 doz.
Tumblers, fluted bottom.....	30 “
Water bottles.....	2 50 “
Celery glasses.....	1 10 “
Spoon holders.....	60 “
Oil or vinegar bottles, drop stopper.....	1 15 “
Salts and peppers, silver-plated tops.....	63 “
Syrup cans.....	1 25 “
Whiskey glasses.....	25 “
Cracker jars	2 75 “

This was the best offer received from a manufacturer, but since the last meeting of the committee in New York, one of the members has found that we might possibly make better terms with jobbers and we would, therefore, recommend that before making a contract for glassware, we should receive competitive bids from the different large dealers of the state with a view of finding out if more advantageous terms cannot be obtained from them, than the ones we have already considered.

The importance of this is emphasized when we stop to consider that not one manufacturer makes the entire line of goods we desire, and that, therefore, any contract that might be entered into would be only for a partial list of our needs and would nullify that provision of our recommendations which provides that certain articles should be of uniform style.

All of which is respectfully submitted.

(Signed,)

WILLIAM MABON,
W. S. REMINGTON,
H. J. LEONARD,
Committee on Crockery.

Monthly Conferences

President Wise suggested that the report be divided into three parts, viz.: Crockery, planished ware and glassware, and that the conference take action upon each portion separately.

Dr. Talcott moved that the portion relating to crockery ware be accepted and adopted. Motion seconded by Dr. Wagner and adopted.

President Wise stated that it was now understood that the committee was authorized by the representatives of the State hospitals to enter into a contract for furnishing crockery with the firm recommended by the committee for one year.

The committee was also directed in making the contract to insert a provision therein covering breakage in transportation.

Dr. Talcott moved that the recommendation of the committee in regard to planished ware be adopted. Carried.

Dr. Mabon stated that the substance of the committee's recommendation was that planished ware be purchased from Manning, Bowman & Co.; and that as there was so little used a formal contract would not be necessary.

Commissioner Brown gave notice that estimates would only hereafter be allowed for goods of this class purchased from that firm at the price named by the committee.

Dr. Talcott moved that that portion of the report of the committee relating to glassware be adopted, and that the committee be continued, with authority to make prices and enter into contract.

Seconded by Dr. Howard and adopted unanimously.

George W. Griffith of Utica, appeared before the conference and announced himself as a candidate for the position of purchasing agent for the supplies of teas and coffees for the state hospitals.

Mr. Griffith stated that he had had sixteen years' practical experience in this line, and was now engaged in the tea and coffee business, and considered himself competent in every way to judge the standards of goods, to draw and test coffees and to draw and test teas.

Monthly Conferences

Dr. Howard reported as follows in the matter of boiler insurance:

Mr. Chairman and Gentlemen.—I have requested from insurance companies a proposal for insuring each boiler of the state hospitals to the amount of \$4,000, the liability of the company for any one accident to be limited to \$35,000, the pressure to be carried by each boiler to be stated on the policy, inspection to be guaranteed quarterly and as requested by the superintendent of each institution, new boilers to be added at any time at the pro rata rate, removed boilers to be rebated at any time at the pro rata rate, the policy to be a blanket policy covering all the boilers or written in separate policies for each institution as may be decided at this conference. As a result of that I have received propositions from the Hartford Steam Boiler Company to insure the boilers at \$30 per boiler, in conformity with those requirements, and from the Fidelity and Casualty Company to insure the boilers according to this request at \$29 each, there being but one dollar difference on a boiler on those propositions; but I am also in receipt of a proposal from John H. Wood, real estate and insurance, 169 Broadway, New York, to insure these boilers at the rate of \$20 each. The company is not stated in the proposal. I telegraphed him to get the company, but he probably was out on Saturday and did not answer, so I telegraphed him again to be here this afternoon and explain his proposal. I should have added in connection with this proposal that there are to be four inspections each year, and as many more as the superintendent of each hospital requests, and that boilers may be added at the pro rata rate, and may be taken out at any time at the pro rata rate. That is from all three. I did not suppose that there was a third company doing business in this state that was worthy of our consideration at all; but this gentleman having requested the privilege to make a proposal I have received it and presented it.

Mr. John H. Wood appeared before the conference and stated that he represented the United States Co., corner Liberty and Nassau streets, New York city, and the Guarantors Co., of Phila-

Monthly Conferences

delphia; that either of these companies was ready to make this proposition.

Dr. Howard.—Who are these inspections to be made by — by employes of the company who are regularly employed for that purpose or by residents of Binghamton and Rochester and Buffalo, etc.?

Mr. Wood.—The United States Company has offices in various cities; they have inspectors in Rochester, Middletown, Auburn, and others I cannot tell you. The proposition is for three years. The president of the United States Company was Benjamin F. Tracy; it is now Mr. Hinckley. This company has been in business for years.

Commissioner Brown.—Are you authorized to do business with the State of New York by those companies?

Mr. Wood.—Certainly.

Commissioner Brown.—What is the capital of each of those companies?

Mr. Wood.—The United States Company, I believe, has a capital of \$300,000, and the other is \$500,000. They have assets of from \$800,000 to \$1,300,000.

President Wise: Without taking any action in this matter, unless the conference wants to take action, you have a proposition before you with a statement that it is a responsible company, which cannot be ignored. I would suggest that a resolution be offered that Dr. Howard be continued as a committee and that he make an investigation through the Insurance Department or other sources as to the reliability of this company or companies. This is an important matter, and provides for insurance for three years, and I do not know but it would be better to defer action until next month, and allow Dr. Howard to report at that time.

Mr. Bush, representing the Hartford Steam Boiler Co., appeared before the conference, and stated as follows:

Mr. Bush.—According to the state insurance law no company can write a policy with a limit any more than 10 per cent. of its capital stock and surplus, and we have an idea that some of the

Monthly Conferences

bids put in will not comply with this requirement, and, in fact, we are pretty sure of it.

Mr. McGarr stated that the representative of the Hartford Company had just informed him that that company would continue the insurance on the boilers at the present rates for thirty days.

Dr. Hurd moved that the committee be continued, and that Dr. Howard be instructed to make an investigation into the reliability of the companies represented by Mr. Wood, and to report to the superintendents at the next conference, the present insurance being extended thirty days at the present rate.

Seconded by Dr. Talcott, and adopted unanimously.

President Wise called attention to an error in the printed report of the last conference, which the hospitals should not act upon. It reads that Commissioner Brown stated that the Commission would hereafter allow a per capita of 3 cents per week or \$1.56 per year per patient for fresh and dried fruits. This was not the intention of Commissioner Brown. Commissioner Brown intended that there should be a maximum of 3 cents per week fixed, but that the estimates for this year should be based upon previous estimates, and that it was not expected that hospitals that have heretofore estimated at the rate of 1 and $\frac{1}{2}$ cents per week per patient shall immediately estimate for the full 3 cents per capita.

President Wise also stated that he had noticed in the matter of the per capita allowance of 3 cents per week for amusements that hospitals that have previously not asked for to exceed one cent per capita had since the adoption of the 3 cent per capita taken advantage of the opportunity offered, and estimated for the maximum allowance and have expended it. In his opinion this action was not justifiable, and he gave notice that the Commission should hereafter give this matter careful attention.

President Wise stated that in accordance with the suggestion made at the previous conference had prepared a basic dietary for the month of December; that proofs of the same were now in his hand, and would be exhibited to the conference, and that

Monthly Conferences

printed copies of the same would be forwarded this day to the several institutions. This dietary is suggested, for the coming months for all patients who are not sick or acute cases, and it is possible that a further exception will have to be made for patients who do hard physical labor. The question of additions for employes has not been considered. This dietary is suggested, not ordered, by the Commission, but the Commission reserves the right to ask the hospitals to make a report at the close of the month as to any departures that have been made, and the reason for the several departures. The Commission also desires to know how many patients have been served with special or extra diet, or diet in addition to the diet mentioned in the dietary, and what the articles have been, and to how many patients each article has been served.

Commissioner Brown stated that he had made up during the past month from the treasurers' reports a statement showing the whole quantity of coffee purchased during the past year and from reports made by the hospitals reduced it to its equivalent in gallons, and from that had prepared a table showing the average number of gallons of coffee consumed per day, the number of ounces of ground coffee per gallon, and the number of cups furnished per capita to patients and employes daily, which taking as a basis the population of each hospital for the month of December, 1897, shows as follows:

HOSPITAL	Gallons coffee consumed per day.	Cups per day.	Ounces ground coffee per gal.
Utica	171	2.97	3.06
Willard	312	2.44	5.58
Hudson River	400	4.25	4.16
Middletown	125	1.85	5.4
Buffalo	150	2.14	3.88
Binghamton	200	2.57	4.12
St. Lawrence	200	2.47	5.74
Rochester	180	5.92	1.7
Long Island	783	5.04	3.35
Manhattan	1,137	2.66	5.85

Standard ounces per cup 6 oz.

Monthly Conferences

Commissioner Brown stated after January 1, 1898, when it was expected the new method of making coffee would be in complete operation throughout the system, the quantity of coffee estimated for monthly by the hospitals must be reduced from 25 to 30 per cent.

Dr. Mabon moved that a committee consisting of one superintendent and one steward be appointed to prepare a dietary for the state hospitals for the month of January. Adopted.

The chairman appointed as such committee Dr. Blumer and Steward Gilbert.

The president stated that this dietary should be distributed by the 15th of December, and that probably another month it might be distributed as early as the 10th.

Dr. Howard moved that the tea committee be continued for another month with authority to purchase tea for all the state hospitals. Carried.

Commissioner Brown called the attention of the conference to the fact that he had learned recently at one of the hospitals that a considerable saving of water had been effected by reducing the pressure, and urged that all hospitals that procured their water from local companies investigate this matter, with a view to ascertaining whether or not the supply of water was being wasted, and if so, that measures be taken looking to the remedying of this evil.

It was decided that the several hospitals should order through the Utica State Hospital their supplies of sulphonal, trional, aristol and phenacetin.

Commissioner Brown stated that the Commission had received information that western flour was being adulterated with a large quantity of western corn, and stated that the hospitals in purchasing flour should require a guarantee from the manufacturers that the flour purchased did not contain corn.

Commissioner Brown requested that when any of the state hospitals desired an opinion from the Attorney-General upon any

Monthly Conferences

subject the same be asked through the office of the Commission, in order to avoid confusion and embarrassment.

Commissioner Brown stated that on a recent visitation of the Hudson River State Hospital he had noticed a potato peeler, which had fallen into disuse, but which was experimented with in the presence of Commissioner Parkhurst and himself, and found to work very satisfactorily, and suggested that it might be well for the hospitals to correspond with Hudson River and find out the name of the manufacturers, and make a trial of the same.

Commissioner Brown stated that the question had been raised as to the advisability of buying beef and corning it on the hospital premises, and that he had discussed the matter with Mr. Wiley, the largest retail dealer in Albany, and been informed that it was more profitable to buy canned corned beef from western packers, but that care should be taken in buying that from which the juice had been extracted for beef extract. The hospitals should govern themselves accordingly in their purchases.

Commissioner Brown called the attention of the conference to the fact that it had been discovered that one of the state hospitals had entered into a contract in the early part of November for certain supplies, and that the Commission had not been notified of the same until within a day or two; that such contract was therefore clearly invalid and in violation of the law; that all contracts should be sent to the office of the Commission at once for examination and approval.

Commissioner Brown notified the conference that Judge Gaynor, of the Supreme Court, Kings county, had made a decision in the Meyer case, which affirmed the opinion of Judge Lawrence that it was absolutely within the discretion of the superintendent to reject and discharge a case.

Commissioner Brown stated that a statement should be hereafter made in estimate No. 3 showing the number and classification of working patients. He also said that patients engaged in ward work and work of that kind were not entitled to receive

Monthly Conferences

additional ration allowance of beef, etc., the same as patients engaged in hard labor.

Commissioner Brown read correspondence from the South American Silver Co., in regard to tableware, as follows:

APPENDIX 2.

SOUTH AMERICAN SILVER CO., 126 CHAMBERS ST.,

NEW YORK, Nov. 13, 1897.

Mr. T. E. MCGARR, *Secretary State Commissioners in Lunacy*:

Dear Sir.—We understand that you place your orders for table ware about the first of the year. We venture to submit to you a sample of a new line of tableware, i. e., new in your department, for your examination. We sent you a sample tea spoon yesterday, and will send you a sample knife to-day or Monday.

We would like to have you examine this ware very carefully and note its superior qualities in every respect. In the first place, the ware is made of one solid piece of metal. Therefore its life depends entirely upon the way it is used. There is no plating to wear off, and after years of wear it will look as bright and clean as new, and when kept polished it will not tarnish any more readily than plated-ware, and will live very much longer.

We should like to have you look carefully at the knife. One particular feature in our knives, which are made from this metal, is this, they can be burnished, at any time; plated knives, or silver-plated knives cannot be burnished, and the silver will strip from the plating and they are ruined forever. Please bear this fact in mind. They are warranted never to show any signs of rust any more than solid sterling silver. This is a high-grade table ware in every respect. We are placing it with many of the largest hotels throughout the country.

After receiving these two pieces, would you kindly advise us to whom we should submit samples for your next supply?

Awaiting your prompt favor, we beg to remain,

Yours truly,

SOUTH AMERICAN SILVER CO.

Monthly Conferences

NEW YORK, Nov. 19, 1897.

Mr. T. E. MCGARR, *Secretary State Commission in Lunacy:*

Dear Sir.—Replying to your esteemed favor under date of the 17th, in regard to prices on our Columbian silver tableware, we shall be pleased to quote you the following prices, gross quantities:

Tea spoons	per gross,	\$9 00
Table spoons	"	18 00
Dessert spoons	"	16 00
Table forks	"	18 00
Dessert forks	"	16 00
Table or dinner knives.....	"	27 00
Dessert or tea knives.....	"	25 50

We, of course, stamp the name of the institution for which the goods are ordered on each piece; no charge for this.

There is but little further that we can say in regard to the ware. It is the only metal on the market we know of, outside of steel, of which a good knife can be made. It has but one competitor, that is, high-grade plated-ware, and this is better for service in every respect than the best grade of plated-ware on the market.

Hoping to receive further orders, we beg to remain,

Most sincerely yours,

SOUTH AMERICAN SILVER CO.

NEW YORK, Nov. 19, 1897.

Mr. T. E. MCGARR, *Secretary State Commission in Lunacy:*

Dear Sir.—We hereby enclose you our net prices on tableware, as requested in yours of the 17th. We are very anxious to place this tableware in the state institutions. This is the first time we have made any effort to do so, but the ware has been on the market, and has been used by some of the largest hotels for two years, and we speak confidently when we say that we believe that this ware will give very much better satisfaction than any other tableware that you can secure.

Monthly Conferences

Now, Mr. McGarr, if it would be necessary, or be to our advantage in any way to send one of our representatives to Albany at any special time in the interest of these goods, we should be glad to do so. We have unbounded confidence in the merits of the goods, and should be glad of an opportunity to demonstrate our claim in regard to them.

Thanking you for the promptness with which you answered our former communication, we beg to remain,

Very sincerely yours,

SOUTH AMERICAN SILVER CO.

SOUTH AMERICAN SILVER —(SOLID)

Net Price List.

	Per doz. boxes.
Spoons, tea, 6 in a box.....	\$18 00
Spoons, coffee, 6 in a box.....	18 00
Spoons, orange, 4 in a box	18 00
Knives, fruit, 4 in a box.....	18 00
Knives, dessert, 3 in a box.....	18 00
Knives, dinner, 3 in a box.....	18 00
Spoons, soup, 3 in a box.....	18 00
Spoons, table, 3 in a box.....	18 00
Spoons, berry, 1 in a box.....	18 00
Forks, pickle, 3 in a box.....	18 00
Forks, dessert, 3 in a box.....	18 00
Forks, dinner, 3 in a box	18 00
Salt and pepper shakers, and napkin ring, 1 each in a box.	18 00
Sugar spoon and butter knife, 1 each in a box.....	18 00
Nut picks, set of 6, with crack in a box.....	18 00
Child's set, knife, fork and spoon in a box.....	18 00
Child's cups, 1 in a box.....	18 00
Gravy ladle, 1 in a box.....	18 00
Soup ladle, 1 in a box.....	18 00

Monthly Conferences

NEW YORK, Dec. 1, 1897.

Mr. T. E. McGARR, *Secretary State Commission in Lunacy*:

Dear Sir.—Your esteemed favor under date of the 26th, in regard to better prices on the knives of Columbian silver has been received and considered very carefully.

Now, Mr. McGarr, in quoting you prices on these goods we figured that we were entitled to a 10 per cent. margin, and we have figured exactly a 10 per cent. margin on these goods. We appreciate the fact that the knives are a little high in comparison with the other goods, and yet to make these knives of this metal, and in the manner that these knives are made, it is impossible for us to lessen the cost of producing the goods. This, however, does not change the fact that the price of the knives do seem a little high in comparison to the other goods.

If you will favor us with the contract for a full line, as quoted, we will put the knives in at cost, or at a discount of 10 per cent. from the prices quoted, namely:

Dinner knives	\$24 30 per gross.
Dessert knives	22 95 “

We are more than satisfied that if you should adopt this line of tableware that you will find it to give you better service for the money than anything you have ever tried.

Hoping to receive a favorable reply from you shortly, we beg to remain,

Sincerely yours,

SOUTH AMERICAN SILVER CO.

Per D. H. McCONNELL.

Commissioner Brown stated that it had been suggested recently that some amendments should be made to the specifications for beef; that there was at present nothing to prevent people bidding who have no regular place of business, and simply go around and buy beef here and there and deliver it and make an immense profit; that none should be allowed to bid except those having regular

Monthly Conferences

slaughtering houses or packing houses. The following additions to the specifications had been suggested:

The class of beef to be furnished shall be that known as western dressed beef, i. e., cattle or beef killed and dressed in the states of Indiana, Illinois, Missouri, Kansas and Nebraska, and shipped to the east in refrigerator cars.

Bidders on beef supply shall be restricted to those persons, firms or corporations which are actually engaged in the packing and slaughtering of beef.

This would guarantee the obtaining of beef that has been inspected before and after killing by the U. S. Agricultural Department, and would insure a government official tag on each fore and hind quarter, or four tags to each carcass.

Commissioner Brown suggested the use by the hospitals for patients of paper napkins, which can be purchased for about fifty cents per thousand, as being in the line of economy.

A representative of the Albany Perforated Paper Co. appeared before the conference and demonstrated how to adjust the fixtures furnished by that company for toilet paper in order to prevent waste.

In reply to an inquiry of Dr. Pilgrim, President Wise stated that a graduate of a training school transferred to employment not strictly connected with the care of patients would be entitled only to the scheduled wages of such new occupation.

President Wise stated that a great deal of trouble was experienced in the office of the Commission and unnecessary work caused by the practice of carrying balances of special appropriations beyond the time when they should expire, and gave notice that the Commission would hereafter cancel all unexpended balances, excepting for contracts, after a certain period — three or four months. Also that the hospitals were very much inclined to hold on to balances and to use them for purposes not originally intended, and that this practice must be discontinued, and such balances would be canceled, and the hospitals must re-estimate.

President Wise called the attention of the superintendents to the fact that the Commission was seriously embarrassed in its

Monthly Conferences

office work by the excessive number of re-estimates and supplemental estimates, and stated that hereafter when an estimate had been made for an insufficient quantity of an article or at too low a price, a communication should be sent to the office of the Commission, and permission obtained to purchase the same, and the item inserted in the next monthly estimate, with a full statement as to the reason for such increase of quantity or price, and that the same had been approved by the Commission under a certain date.

President Wise stated that the Commission was at present preparing a careful reclassification of the estimates, in order that the hospitals might be uniform in their method of estimating. An examination of the treasurers' reports shows that some articles are estimated for under two or three different estimates; in one instance an article was found estimated under six. It is therefore impossible to make anything like an accurate comparison of the several hospitals. The hospitals will be furnished with blanks requiring a quarterly report of cost under these several subdivisions at the end of each quarter, and at the end of the year a report for the year, which can be used as a standard of comparison of cost of maintenance.

A communication was read from the Long Island State Hospital, under date of November 2, 1897, in the matter of indelible ink, as follows:

APPENDIX 3.

STATE OF NEW YORK—LONG ISLAND STATE HOSPITAL,

KINGS PARK, Nov. 2, 1897.

In the matter of Indelible Inks.

To the State Commission in Lunacy:

Referring to the criticism of Stafford's inks, we desire to say that after trying a great many inks we think this the best for cloth marking purposes, that we have been able to obtain, where brush and stencil are used. We mark all articles of bedding and such other pieces as can be marked with a stencil with this ink.

Monthly Conferences

Most of the patients' clothing is marked with a smaller marking, and generally with Payson's ink, thereby effecting a considerable economy in the use of Payson's ink and giving better satisfaction than the stencil marking.

Respectfully yours,

O. M. DEWING,
Actg. Gen'l Sup't.

On motion, adjourned.

STATE HOSPITALS—JANUARY ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held December 30th, 1897.

Present.—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. A. Macy, M. D., medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, E. C. Dent, M. D., medical superintendent, female department, Ward's Island.

Commissioner Wise, chairman.

Commissioner Brown stated that he had lately had some conversation with Commissioner Wieting, of the Department of Agriculture, in regard to the matter of "half skim" cheese, which was discussed at a former conference; that investigation had shown that it was impossible to obtain this article in the market, but that Commissioner Wieting had stated that, if the hospitals desired, an arrangement could be made whereby this grade of cheese could

Monthly Conferences

be made under the direction and supervision of the experts connected with his department.

Dr. Haines, bacteriologist of the State Department of Agriculture, appeared before the conference in behalf of Commissioner Wieting, and stated that what is termed "night skimmed" cheese, a cheese not containing the full amount of butter fat, is made in this state, and is sold for less price in the market than full cream cheese; that in his opinion this cheese was nearly as valuable as a food as full cream cheese, and that for the use of state hospitals it would be nearly as valuable, and at the same time could be manufactured for about one-half the cost; that the Department of Agriculture employed experts for the purpose of overseeing the manufacture of dairy products, and that if the Lunacy Department desired, he was directed by the Commissioner of Agriculture to say that he would send one or more of his experts to one or more factories in the state, and make samples of this cheese, in order that the hospitals might know experimentally its value. He stated that this cheese was not quite as palatable as full cream cheese, having a rather flat taste, and that it should be used soon after being made.

Commissioner Brown stated that Commissioner Wieting had made another suggestion, namely, that of sending his farming experts to the various state hospitals for the purpose of examining into the methods of farming pursued, and whether the same were of a kind that were advantageous to the state.

Dr. Macy moved that the Department of Agriculture be invited to send such an expert around the various hospitals to make such a report to the Commission.

Seconded by Dr. Blumer, and unanimously adopted.

Dr. Hurd moved that the offer made by Dr. Haines in regard to the making of cheese of the kind referred to be accepted by the state hospitals, and that samples of the cheese be requested of him.

Seconded by Dr. Macy, and adopted unanimously.

Dr. Howard.—I would respectfully report that, in accordance with the request of the last conference, I made careful and com-

Monthly Conferences

paratively thorough inquiries relative to the boiler insurance companies submitting proposals, through the Insurance Department and through other sources, and I am unable to find anyone who is willing to condemn the insurance companies as unfit for this work, and so I report that all these companies are allowed by the Insurance Department of New York State to do the business outlined in the requirements as set forth by this committee, and during the month there has been received from the Union Casualty and Insurance Co., a proposal to insure each boiler for \$18 per boiler, through one agent, and through another agent for the sum of \$20 per boiler, and it seems to me that the report of the committee is fairly complete when it states that the Fidelity and Casualty Co. will insure each boiler for a term of three years for \$29, the Hartford Steam Boiler Insurance Co. for \$30, the United States Casualty Co. for \$20, and the Union Casualty and Insurance Co. for \$18, and guarantee all of the requirements that have been set forth by the committee.

President Wise.—May I ask if this supplemental proposition was received after the other propositions were made known at this conference last month.

Dr. Howard.—Yes, sir.

President Wise.—Hence the company making that proposition had the advantage of knowing what the other companies proposed?

Dr. Howard.—I believe so; yes, sir.

President Wise.—Then their proposition could not be accepted unless all the companies were invited to make new propositions on the same basis. Has the committee taken that into consideration in making its report?

Dr. Howard.—Yes, sir; and I bring forth in this report that these proposals from the Union Casualty Co. have been received this month. I would not feel that the committee had the right to decide whether the conference should consider that proposal or not. It was certain that advertisements were not inserted in the regular manner and competition secured for propositions to be opened on a certain date, and, of course, this company maintains

Monthly Conferences

that it had no knowledge that any such insurance was contemplated. I have notified each of the other companies that this lower proposition has been received, and would be handed into the conference for consideration, and they have none of them signified any desire to present any lower proposal.

Dr. Talcott moved that the committee be continued and empowered to execute a contract for the insurance of the boilers of the state hospitals for three years, after notifying the several insurance companies authorized to do business in this state, and after receiving propositions for the same to be opened in the usual way.

Dr. Pilgrim moved that the matter of continuation of the present policies be referred to the same committee, and continued until the execution of a new policy. Carried.

Dr. Mabon, chairman, submitted a report in the matter of contracts for crockery and glassware as follows:

STATE OF NEW YORK — ST. LAWRENCE STATE HOSPITAL,

December 28, 1897.

To the Conference:

Gentlemen.—As chairman of the committee on crockery and glassware, I beg leave to report that a contract has been entered into between the chairman of your committee, representing the managers of the state hospitals and the Mayer Pottery Company of Beaver Falls, Pa., for such semi-vitreous ware as the state hospitals may require during the coming year.

The State Commission in Lunacy have issued a circular letter to the various hospitals giving prices and terms of payment as well as the styles that may be ordered.

Your committee would further report that a contract is now being made with James M. Shaw & Company of New York City for such articles as were specified in a previous report, to wit:

Water bottles,	\$2 50	per dozen.
Oil bottles, 6 oz.,	1 00	“
Cracker Jars	3 00	“
Molasses jugs,	1 75	“

Monthly Conferences

Salt and pepper shakers.....	\$3 25 per gross.
Celery	1 10 per dozen.
Spoon holders	55 “
Tumblers	28 “
Medicine glasses	25 “

We desire to emphasize that portion of our report made to the conference for October estimates in which water bottles instead of pitchers are to be used on dining room tables for drinking water.

. Respectfully submitted,

WILLIAM MABON,
Chairman of Committee.

Dr. Talcott moved that the report be accepted and adopted. Carried unanimously.

President Wise exhibited to the conference a filing box, illustrating the system of filing commitment papers, etc., at the St. Lawrence State Hospital. This box is arranged to contain papers relating to about fifty cases. He suggested that in his judgment it would be advantageous for the several hospitals to adopt this method of filing.

President Wise stated that a complete set of the new forms had now been sent to each hospital, and that the Commission should hereafter require that as fast as the old forms were used up, they should be abandoned, and when new forms are ordered, they must be ordered made in conformity with the forms that are now approved.

Dr. Pilgrim.—In case we want any new form, how are we to get that?

President Wise.—I do not see that you can get it, unless approved by the Commission.

President Wise stated that at his next inspection of the hospitals he should particularly examine into the medical service; that he should examine the history of every case admitted since his previous visit, and review the history of that patient from the

Monthly Conferences

time of admission to the time of his visitation, the treatment and the records of treatment that exist.

Dr. Howard moved that the action of the stewards relative to the purchase of coffee for the ensuing four months be ratified by the conference. Carried unanimously.

(The action referred to consisted of a resolution adopted at the conference of stewards with the Commission Dec. 28, 1897, that the superintendent and steward of the Utica State Hospital be authorized to purchase the supply of coffee required by all the State hospitals for the ensuing four months).

President Wise stated that the stewards at their meeting with the Commission Dec. 28, 1897, also passed a resolution which must also be confirmed and approved by the superintendents that they meet in Albany on the 20th of January, 1898, for the purpose of acting as a board of stewards to determine upon the quality and price of staple articles of supply for the ensuing month, the intention being that their report will come to the Commission, and they can use the same in revising the prices of the estimates.

Dr. Blumer moved that the conference approve of the stewards meeting in Albany, January 20, 1898, for the purpose of considering proposals for supplies, and of reporting the result of their deliberations for approval by the conference of superintendents.

Carried unanimously.

On motion, a recess was taken until 8 p. m.

Conference resumed at 8 p. m.

Commissioner Brown in the chair.

Dr. Mabon stated that in Merck's Bulletin he had noticed a substitute for vanilla that could be used in many public kitchens, and that they had some made at St. Lawrence, and found that it was fully as satisfactory as the ordinary vanilla extract. It was made of vanilline, which is derived from a Mexican plant, and costs about \$2.50, against \$6 for the regular extract.

Commissioner Brown stated that he had recently had a long conversation with Mr. Urban, of Buffalo, a very large miller, and in the course thereof Mr. Urban had stated that it was almost

Monthly Conferences

absolutely impossible for any ordinary person handling flour to tell about its quality; he said that flour was priced according to the amount of bran it contained; that the flour that had the least percentage of bran was the highest priced; that a flour that was a shade off color — possessing a larger percentage of bran — was more nutritious, and was worth in the market from 20 to 25 cents less per barrel. It therefore occurred to him whether it was advisable for the State hospitals to purchase this high grade of flour. Mr. Urban also stated that the great millers of this country had agreed upon an expert in the west, and that they sent samples of their flour to this expert to be tested, and that this expert returned such samples to them with a mark showing what such test showed; that he would also furnish the test of other flours, without giving the names of the manufacturers; he said that the purpose of this test was to show how any particular miller's flour stood, for the purpose of keeping the miller up to a proper standard. Mr. Urban stated in reply to inquiry of Mr. Brown that the State hospitals could undoubtedly send samples of flour to this expert to be tested, provided they paid for the same. Mr. Urban also said that the State could buy flour in large quantities to advantage, and then distribute it to the various hospitals, provided it could be done by a committee empowered to make a selection and to make a bid and have it accepted instantly, because dealers when they sold large quantities of flour covered themselves with purchases of wheat at the same time, and did not have to be on the lookout for fluctuations in the market.

Commissioner Brown stated that Louis C. Naisawald, of New York, a broker outside of the sugar trust, had submitted a proposition in regard to sugar, under date of Dec. 15th, as follows:

“I enclose sample of N. O. sugar marked No. 3. This is an absolutely pure cane product. Of course it is not as white color as granulated, but in all other respects fully equal if not better. There is a vast difference in price. This sugar I can secure to-day at 4½ cts. against granulated 5½ cts. * * * .”

Dr. Howard moved that the superintendent and steward of the *Buffalo State Hospital* be requested to purchase flour for the

Monthly Conferences

several state hospitals, excepting Willard, during the ensuing month.

Dr. Wagner moved as an amendment that the matter of purchase of flour for the several state hospitals be referred to the stewards to be acted upon at their meeting January 20, 1898, and that they have power to enter into the purchase of flour for all the state hospitals, with the exception of the Willard State Hospital.

Dr. Pilgrim moved to further amend by providing that the stewards should report the result of their investigation to the conference of superintendents, as required in regard to all other supplies.

The motion as amended was adopted.

Commissioner Brown read a communication from the New York Paper Pail and Box Co., as follows: (This letter was addressed to Steward Remington, of the Rochester State Hospital).

"In reply to your letter of the 23d we submit samples of our white paper napkins, and as we have no doubt that if you adopt them that you will use millions of the same, therefore we give you our lowest price f. o. b. New York. The usual price we sell the 14 x 14 napkins in lots of 100,000 or more is 45 cts. per 1,000, but in larger lots than 100,000, we will sell at 40 cts. In case you will use the 12 x 12 in the same quantities, we will sell at 35 cts. per 1,000."

Dr. Blumer moved that a trial of these paper napkins be made at the Rochester State Hospital, and that the superintendent thereof report to the next conference. Carried.

President Wise stated that the Commission in revising the estimates for the month of January would reduce to some extent the quantity of eggs for general use, as on account of the inferior quality of eggs to be procured at this season of the year, they were not of so much value as a general diet. Fresh eggs for special diet would, of course, be allowed.

The president appointed as the committee to prepare the dietary for the month of February, Dr. Wagner and Steward Remington.

Monthly Conferences

President Wise exhibited to the conference the form of quarterly report of expenditures and per capita cost based on average number of patients resident, to be made up from treasurers' reports. He stated that this form was now ready to be distributed to the several hospitals, and called attention to the fact that the same classification that appeared in this quarterly statement should be followed in making up the monthly estimates.

On motion of Dr. Mabon, the present editorial committee of the *State Hospitals Bulletin* was continued for the ensuing year.

Dr. Blumer stated that in accordance with the action of the conference held at Saratoga last summer, commencing with the January number the publication would be known as the "*The Archives of Psychiatry and Neurology and the State Hospitals Bulletin*."

Dr. Mabon stated that the St. Lawrence State Hospital was so situated that it could manufacture at least butter for its own use and possibly for one other institution.

On motion of Dr. Blumer, Dr. Mabon was appointed a committee to investigate this matter and report.

On motion of Dr. Talcott, adjourned.

STATE HOSPITALS—FEBRUARY ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of the State Hospitals and the Commission, held January 27th, 1898.

Present.—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. A. Macy, M. D., medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H.

Monthly Conferences

Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, A. E. Macdonald, M. D., general superintendent.

Commissioner Wise, chairman.

The chairman stated that under a resolution adopted at the last conference it was determined that the stewards should report to the superintendents at this conference the results of their meeting in Albany on January 20th, 1898, and that he had the full minutes of their meeting now before him.

Dr. Blumer moved that the report be read. Carried.

It appearing that there was a large amount of extraneous matter included in the minutes, on motion of Dr. Macdonald, the motion of Dr. Blumer was reconsidered.

Dr. Macdonald moved that only those parts that required action by the conference be read. Carried.

Auditor Sanford read such portions of the proceedings of the meeting of stewards as required action:

“By Mr. Remington: *Resolved*, That the stewards would recommend that flour may be purchased of a lower grade than the No. 1 Minnesota spring patents from hard spring wheat and that flour from winter wheat may be used when found to be satisfactory as to quality and as economical in price. Carried.”

Dr. Macdonald moved that action upon this recommendation be deferred until the next conference.

Seconded by Dr. Talcott and carried.

The chairman stated that before proceeding further he would like to say a word in behalf of the Commission; that the Commission have made a great many concessions to the representatives of the managers, as he called the superintendents, in the submission of questions of this kind in regard to purchases; that there had been a great deal said in the last legislature in criticism of the method of purchasing in the state hospitals; that the hospitals do not take advantage of combining in their purchases and getting as favorable prices as they could get; that it would not take the turn of a hand or scarcely the turn of a hair to make them legislate still more fixed and binding condi-

Monthly Conferences

tions. He would not say that he was in favor of this, but if the superintendents were going to defer these matters from month to month, and take no action, it might be necessary for the commission to exercise its own powers to a somewhat greater extent. The matter of the stewards' meeting was very carefully considered, and was confirmed by the superintendents, and they had met in an orderly way and gone over these matters. He believed that in the purchase of nearly all supplies the opinion of the steward is accepted by the superintendent, especially in the matter of such standard supplies as were considered by the stewards at the meeting in question. He thought if this matter were deferred, and all other matters deferred in the same way until next month, it would be too late for purchases for next month, and they would not go into effect for three months from the time the matters were first considered. He would suggest that these questions be taken up a little more seriously, and that some action be taken on these matters at this meeting.

Dr. Macdonald stated that he had it in mind to shortly offer another resolution that the proceedings of the stewards' meetings should be put in print in the hands of the superintendents at least two days before the conference in order that they might consider the matters contained therein before coming to Albany; that it was impossible to act intelligently upon these matters upon one reading.

Dr. Wagner moved that the stewards of the several hospitals be directed by the superintendents to purchase No. 1 hard spring wheat flour, of either the first, second or third grade, or such combinations as may appear desirable at the several institutions, leaving the choice to the local management of the hospital, whether it shall be of the first grade, or part of the first and part of one of the other grades.

Seconded by Dr. Talcott.

Dr. Macdonald raised the point of order that this motion could not be considered until the motion just passed was reconsidered.

Monthly Conferences

The point of order was declared by the chairman to be well taken.

Dr. Macdonald moved that the previous motion deferring action until the next conference be reconsidered.

Carried, Dr. Macdonald voting in the negative.

Dr. Wagner renewed his motion.

Commissioner Brown said that he would like to ask how, if that scheme were adopted, anything substantial could be gained. If it was left to the discretion of the institutions, there would have to be three or four kinds of flour. It seemed to him in order to gain anything by purchasing on a large scale, the hospitals would have to unite on some one grade.

Dr. Wagner stated that their information led them to believe that to purchase on a large scale would make but little difference from purchasing in carload lots for the several hospitals; that there was nothing practically gained by it, and he thought that it was far more desirable that each institution should purchase its flour separately. He considered that to purchase in one lump would create dissatisfaction in many parts of the state on the ground that it shuts off many merchants who are residents of the state, and who would like to have a chance to submit a proposal.

Commissioner Brown said that if that position was to be adopted, the scheme of attempting to buy as a unit in large quantities for general distribution might as well be abandoned. He further said that he seriously believed that unless the hospitals could unite, under the present statutes, and act harmoniously in this matter, a great central purchasing agency would almost surely be established, and that he was perfectly satisfied that it would take but a few words to bring about such a result. This could be avoided by uniting on some of these principal staple articles.

The chairman stated that he had already said substantially the same thing, and that there would be no excuse for such a thing if the hospitals would unite to a greater degree than they do at present in the purchase of some of the staple articles. It

Monthly Conferences

need not apply to everything, but it could be shown there was now substantially a central purchasing agency in which each hospital is represented. He should deplore as much as anybody the establishment of a central purchasing agency, but he recognized the tendency in that direction, and thought that this would be a good way to meet and neutralize it.

Dr. Pilgrim moved that for one month an experiment be made with such flour or such grades of flour as the stewards might determine upon.

The chairman stated that it would have to be made in the form of an amendment.

Dr. Macdonald said that Auditor Sanford had stated that the Long Island State Hospital was already under contract for four months' supply, and therefore a general contract could not be made.

The chairman stated that those hospitals which were under contract would have to be exempted.

Dr. Macdonald said that he understood the Willard State Hospital was also exempted from this arrangement.

Dr. Wagner offered, as a modification of his previous resolution, the following:

Resolved, That it is the sense of this conference that the flour known as Gold Medal be adopted for one month, and that a contract be entered into for the entire hospital service.

Dr. Howard moved as an amendment that the use of winter flour, made from the whole wheat, the whole product, be adopted as the standard flour of the New York state hospitals.

In connection with the above, Dr. Howard stated that otherwise the Rochester State Hospital should be exempted; that it was of just as much importance that the Rochester hospital being in the centre of the milling interests in this State should be considered in connection with such a matter as the Willard hospital, and he thought from an equity standpoint it was of much more importance. It really seemed to him to be an outrage that they should gather together here as a conference and decide that all of the insane in this state should use bread made

Monthly Conferences

from wheat which cannot be raised in this state and unless they could purchase it at less price they would bring upon themselves absolutely just condemnation. It might be possible that certain eastern hospitals could buy spring wheat flour at a lower price but it was not so in Rochester and the western part of the state. He could not see why the growers in this state should not feel justly indignant if they should adopt a grade of flour which completely crowds them out of any possibility of furnishing any of the flour products which are used by the great hospitals of this state. These were practically the same words as he said when the original resolution was adopted which selected spring wheat flour which all know is a western product as the standard for state hospital use.

The chairman stated that neither the original motion of Dr. Wagner nor the amendment of Dr. Howard had been seconded.

Dr. Wagner said that he would like to withdraw his original motion, and move that for the month of February the state hospitals, all without exception, purchase the Gold Medal flour.

Dr. Pilgrim seconded the motion for the purpose of discussion. The motion was lost.

Dr. Macdonald renewed his motion that the matter be deferred until the next conference.

The motion was seconded by Dr. Talcott and declared lost.

After a further lengthy discussion of the question, and the introduction of several resolutions which were not seconded, the chairman called attention to the fact that there were several other propositions made by the stewards to be acted upon and as the discussion seemed interminable, it seemed to him best that Dr. Macdonald's suggestion had better be adopted.

Thereupon Dr. Macdonald again moved that the matter be deferred until the next conference. Carried.

By Mr. Evans—We recommend to the conference of superintendents that a committee be appointed to purchase oat products, such as oatmeal, oat flakes, rolled oats, etc., in quantities sufficient for all the state hospitals, for the month of March."

Monthly Conferences

Mr. Gilbert moved to amend by including tapioca, macaroni, hominy and other corn products.

Motion as amended carried.

Dr. Macdonald moved that action be deferred until the next conference. Seconded by Dr. Macy.

Dr. Mabon moved to amend by providing that the resolution of the stewards be adopted with the exception of macaroni. Seconded by Dr. Blumer.

Dr. Macdonald called for the ayes and noes on his resolution.

Ayes: Talcott, Macdonald, Macy.

Noes: Wagner, Pilgrim, Mabon, Howard, Dewing, Hurd, Blumer.

Lost.

Dr. Howard moved that a committee of three stewards be appointed by the president of the conference to make the purchases for the month of March.

Seconded by Dr. Pilgrim.

Dr. Macdonald moved as an amendment that a committee of stewards be instructed to make inquiries and report proposals and prices to the conference.

The motion was seconded by Dr. Macy, and the motion as amended adopted.

Dr. Macdonald moved as a further amendment that the committee be instructed to report the quality and the price delivered at each hospital.

Seconded by Dr. Talcott and adopted.

By Mr. Remington—We recommend that Grand Bank codfish be substituted for Georges Bank on account of the smaller cost and we further recommend to the superintendents to appoint a committee to purchase all salt fish for the hospitals for the months of March and February.

Seconded by Mr. Evans, and adopted.

Dr. Pilgrim moved that this matter be referred to the same committee. Carried.

Monthly Conferences

The chairman appointed as such committee Stewards Hall, Remington and Cole.

By Mr. Evans—I move that we recommend that the present committee to purchase tea be continued for the next six months from February 1st.

Seconded and carried.

Dr. Macdonald moved that the chairman appoint a committee of three stewards to report to the next meeting of the conference proposals for the supply of tea for the several state hospitals, in which shall be stated the grade of tea, the price delivered at each hospital, and which shall be accompanied by samples of the tea recommended, for six months from the first of March.

Seconded and adopted.

The chairman named as such committee Stewards Hall, Remington and Cole.

By Mr. Evans—I move that a steward of some state hospital be designated by the conference of superintendents to secure a supply of H. O. dairy feed and make a thorough trial and report.

Carried.

Dr. Macdonald moved that the superintendent of the Buffalo State Hospital be requested to instruct his steward to make the purchase for the purpose of experiment. Carried.

The chairman stated that the classification of expenditures blanks were not quite in readiness for submission to the superintendents at this time, but that the Commission had determined when the tables were completed to review them, and address a letter to each superintendent calling attention to matters that are unequal or inconsistent, or appear to be in excess or deficient, and ask for an explanation or make a recommendation. He desired also to call attention to the necessity of the stewards following out the same classification in making out their estimates.

Dr. Howard submitted and read the following report of the committee on boiler insurance:

Monthly Conferences

STATE OF NEW YORK—ROCHESTER STATE HOSPITAL,

January 25 1898.

To the Conference:

Gentlemen.—As a committee on boiler insurance I beg leave to report in conformity to the provisions of the resolution passed at the last conference, that having ascertained from the Insurance Department the names of the companies authorized to do the business outlined in the following requirements, namely:

Number of boilers, about 180.

Insurance to be for three years.

\$4,000 on each boiler.

Liability of the company for any one accident limited to \$35,000.

Pressure to be carried by each boiler to be stated on the policy.

Inspections to be guaranteed quarterly and as requested by the superintendent of each institution.

New boilers to be added at any time at the pro rata rate.

Removed boilers to be rebated at any time at the pro rata rate.

Separate policies for each institution.

And having notified all these companies that competitive proposals were desired by me as committee, for three years' insurance on steam and power boilers at New York State hospitals on or before noon January 15, 1898, and having received competitive proposals on that date as follows:

Fidelity and Casualty Co.....	\$17 00
Union Casualty and Surety Co.....	18 00
United States Casualty Co.....	24 00
Hartford Steam Boiler Inspection and Insurance Co....	30 00
Employers' Liability Assurance Corporation.....	30 00
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In the usual way, the lowest proposal, that of the Fidelity and Casualty Co., at \$17, was formally accepted, and notice thereof was duly forwarded to each hospital and one to the State Com-

Monthly Conferences

mission in Lunacy, which was accompanied by a certified copy of the competitive bids of the five companies.

Respectfully submitted,

E. H. HOWARD,
Committee.

IN THE MATTER OF BOILER INSURANCE.

January 17, 1898.

To the State Commission in Lunacy:

I hereby respectfully inform you that bids for State hospital steam boiler insurance were received on January 15th as follows:

Union Casualty and Surety Co.....	\$18 00
United States Casualty Co.....	24 00
Fidelity and Casualty Co.....	17 00
Hartford Steam Boiler Inspection and Insurance Co....	30 00
Employers' Liability Assurance Corporation.....	30 00

Contract has been made with the Fidelity and Casualty Co. and the several hospitals notified.

Respectfully yours,

E. H. HOWARD,
Committee.

Dr. Pilgrim moved that the report be accepted.

Seconded by Dr. Talcott.

Dr. Macdonald stated that he desired to make a statement in regard to this matter. He was not present at the last meeting, and took no part in the authorization that was given to Dr. Howard, and Dr. Dent, who represented him, did not vote on the subject, and that the Board of Managers did not think, under the terms of the law, Dr. Howard was properly constituted their agent for the making of this contract; that they had considered the matter under his representations, and he would like to say here that the objection was not at all to the terms of the contract, which they all considered very liberal, nor to the company

Monthly Conferences

to which it was awarded, which he thought was the best of those who bid, but simply as to the question whether a certain number of superintendents could combine and make a contract binding all the boards of managers, all the boards of managers not being represented, or, being represented, declining to vote. Under all the circumstances his Board of Managers had now instructed him to represent them, and to join in this special contract but that they did not feel that the contract was properly made.

The motion that the report be accepted and adopted was carried.

Commissioner Brown stated that for the purposes of making contracts for joint purchases of supplies, such as blankets, towels, electrical supplies, etc., the superintendents had always acted as representatives of the managers, and that there was no doubt in the minds of the Commissioners as to the propriety and regularity of this course.

Dr. Mabon submitted and read the report of the committee appointed to investigate the advisability of establishing a creamery for the manufacture of butter for one or more state hospitals as follows:

ST. LAWRENCE STATE HOSPITAL, *January 26, 1898.*

To the Conference:

Gentlemen.—I beg leave to submit herewith a report on creamery butter.

The amount of milk that can be purchased within a radius of four miles of the hospital is insufficient to make butter for more than 3,000 people and it is not advisable to take in a larger territory than that mentioned, because the milk is injured by being transported over rough country road and would not yield, therefore, as large a percentage of butter per hundred pounds as that which is hauled only three or four miles.

Most creameries purchase milk at a stated price per hundred pounds and the skim milk is taken away by the farmers who

Monthly Conferences

supply the factory, and at an allowance of twenty-five cents per hundred pounds. The average price of milk during eight months of the year, or the time that butter can be made, is \$1 per hundred less 25 cents for skim milk returned, or 75 cents net. The buttermaker receives from three to three and one-half cents per pound for making the butter, out of which he has to provide tubs, salt, labor, fuel, etc. Reasoning along these lines, we find that it would cost 3,000 people, consuming 11,250 pounds of butter per month of thirty days, \$337.50 for the making, this amount being the cost of manufacture and the profit to the maker.

At an expense of from three to four thousand dollars, machinery can be purchased and installed, the present milk house at the St. Lawrence State Hospital enlarged and changes made in the cold storage plant, sufficient to enable us to manufacture the necessary quantity of butter for 3,000 people.

The interest on this investment at five per cent. would amount to \$16.66 per month, and other expenditures, including tubs, labor, fuel, etc. would bring the total up to \$139.32, leaving a profit to the state each month of \$198.18.

The facts in regard to the manufacture of butter were furnished me by a man who for many years had charge of a successful creamery, and he assures me that the expenses numerated herein are in excess of what they are likely to be. At the same time, it seems best to cover every possible contingency in regard to the cost of manufacturing.

Milk varies in the proportion of butter fat according to the season of the year, the quality of grass and the care the cattle receive, but the average amount of milk required to make one pound of butter is 22.44 pounds. Thus, to manufacture the quantity of butter mentioned above, we would require a supply of about 12,729 pounds of milk daily for eight months; 12,729 pounds of milk would cost the state \$95.46 daily for 241 days, or a total of \$23,005.86, this amount furnishing a year's supply. Now to this amount must be added the expense of manufacturing at \$139.32 per month, or \$1,671.84 per year, making a grand total of \$24,677.70.

Monthly Conferences

Three thousand persons would require 375 pounds of butter per day or 136,875 pounds per year; at a low average of 19 cents per pound, the butter would cost \$26,006.25, or a total saving of \$1,328.55.

The price at 19 cents per pound is an unusually low one except during the past two years, when butter and all other dairy products were exceptionally cheap.

In any event, the price paid for milk would be the same as that paid at other creameries, and the saving that would be accomplished would be the manufacturer's profit as well as the middleman's.

I incorporate herewith a table for nine months in 1897 which was given me by a butter manufacturer. The first column shows how much milk it took to make one pound of butter, and the second the price paid per hundred pounds of milk:

April	24.74 lbs.	\$0.60
May	24.23 lbs.	.55
June	23.66 lbs.	.55
July	24.10 lbs.	.57½
August	22.66 lbs.	.62½
September	21.75 lbs.	.75
October	21.25 lbs.	.85
November	18.98 lbs.	.85
December . . .	17.82 lbs.	.90

Average, 22.44.

From other reliable sources I am led to believe that the amount of milk it takes to make one pound of butter is nearer 20 than 22.44.

One former manufacturer, who ran what was called a patron's creamery, received all the milk from certain farmers and was paid three cents a pound for making it into butter. His receipts for the eight months each year during which he ran the factory were \$1,800 and his expenses, including labor, etc., were \$600, leaving a profit for the year of \$1,200. He tells me that butter

Monthly Conferences

makers generally figure that it costs one cent a pound for making and that the other two cents are clear profit.

Your committee is firmly of the belief, even should there be no saving in the cost by manufacturing butter for the hospitals, that the quality can be so improved as to justify the expense. Furthermore, we feel assured that we can successfully meet the requirements of the hospital service.

The facts herewith presented have been gathered from most reliable sources, and I firmly believe that the state can save two cents a pound for all the butter consumed at the St. Lawrence State Hospital and one and one-half cents per pound for all consumed in whatever institutions we may supply. The increased saving at St. Lawrence would be due to the fact that there would be no freight charges.

Respectfully submitted,

WILLIAM MABON,

Committee.

Dr. Howard stated that the committee on use of paper napkins would require further time in which to make a proper report.

Dr. Hurd moved that a committee of two superintendents be selected to consider the subject of dress goods, as to price, quality, etc., and to report at the next conference.

Seconded by Dr. Macy.

Dr. Pilgrim moved to amend that the old committee be re-appointed, as they were perfectly familiar with the facts, and made a very good report.

The original motion of Dr. Hurd was adopted, Dr. Pilgrim voting in the negative.

The chairman appointed as such committee Drs. Howard and Hurd.

Commissioner Brown suggested that a good way to simplify the whole matter in regard to the purchase of supplies would be to have a committee appointed to prepare a form of specifi-

Monthly Conferences

cations for certain lines of staple articles and standard supplies. Advertisements could then be inserted stating that proposals would be received at such time and place and for such staple and standard articles, and this would throw the whole matter open to competition, everybody would know what they were bidding upon, and there would be an opportunity of determining whether the goods were up to the standard. The advertisement need not consist of more than three or four lines, simply stating that propositions would be received at such place and on such a date, for the purchase of such and such supplies, and specifications could be obtained by making application at the various state hospitals.

Dr. Macdonald stated that he thought the suggestion a very meritorious one, if it were made to apply to the last six months of the present year, so that there would be ample time to determine just what to advertise and in what manner. He thought the essential part of such a contract would be that the price should be delivered at the different state hospitals. A man, for example, in Buffalo might bid for an article at a certain price, which he could not deliver to the Manhattan State Hospital at anything like such a price.

Dr. Macdonald offered the following resolution: *Resolved*, That a committee of three superintendents be appointed by the chairman to examine into the matter and report to the next conference to what extent proposals may be solicited for the supply of articles for six months from the first of April for the state hospital system, and to submit a form of specifications therefor. Carried unanimously.

The chairman appointed as such committee Drs. Mabon, Howard and Blumer.

Commissioner Brown at this point introduced to the conference Senator Healey, of Iowa, who has been sent from his state as a special committee to make inquiries in regard to the workings of the insanity law in this state and the actual workings of the State Care System.

Monthly Conferences

The chairman read to the conference the following communication from the director of the Pathological Institute in the matter of scientific apparatus:

PATHOLOGICAL INSTITUTE, NEW YORK, *January 25, 1898.*

P. M. WISE, M. D., *President State Commission in Lunacy, Albany, N. Y.:*

Dear Doctor.—In a communication of January 20th, from Wm. Krafft, he states that he has numerous orders from the state hospitals to import for them various forms of scientific apparatus, free of duty. He is under the impression that a recent interpretation of the tariff act of the federal courts excludes hospitals from the benefits of its duty free clause and has asked us for advice in the matter.

The question of the right of the institute to import has been practically settled in our favor. It seems to us that it would be advisable for the Commission to settle the matter definitely for all the hospitals before Mr. Krafft carries out the orders.

Yours very respectfully,

IRA VAN GIESON.

(Dictated by H. B. D.)

The chairman read to the conference a communication from Mrs. Eleanor Kinnicut, of the Board of Managers of the Manhattan State Hospital, containing comments and criticisms in regard to the dietary for the state hospitals for the month of February, as follows:

STATE OF NEW YORK—MANHATTAN STATE HOSPITAL,

NEW YORK CITY, *January 22, 1898.*

My Dear Mr. President.—At your suggestion, I have made some notes on the hospital dietary for February. My principal criticism in regard to it as a whole is that on sixteen days out of twenty-eight in the month there is no fresh meat allowed at any meal. Syrup is given fifteen times during the month, which strikes me as monotonous, and not very digestible. It strikes me that besides a large amount of salted food, there is too much farinaceous food in proportion to fresh meats, eggs and fresh fruit. I would suggest fruit on one day of the week for dinner instead of pudding between January 1st and June 1st; during the rest of

Monthly Conferences

the year fruit twice a week. Eggs would seem to me in place for at least one meal every week, either at breakfast or supper. As a general criticism, I would like to say that my own experience has taught me that contentment and satisfaction with a dietary is better reached by fixing definitely what the character of each meal shall be, and then making changes in kind but not in character. I mean, for instance, how much is a proper allowance for breakfast, what constitutes a sufficiently hearty dinner and how many articles are sufficient for supper. Having once established these points, if meals vary and do not change in character, patients and employees are neither disappointed nor perhaps sometimes agreeably surprised. I do not think that a poor breakfast is made good by a hearty supper, and again that a hearty breakfast is remembered by patients if on the same day they happen to have a meagre supper. Of course any suggestions that I make in regard to hospital dietary are based on the prices of New York markets. In the matter of fresh fruits, for instance, the markets are often glutted by incoming ships, and fresh fruit, which is very grateful to patients, need not necessarily form an item of added cost. The same applies to fresh vegetables, to fish and to poultry, especially with the sharp variations in the temperature of our climate. There are heavy sendings of all these articles to the New York markets which require at times to be quickly disposed of, and which the steward of the Manhattan State Hospital could promptly use to our advantage. Allow me to say, in closing, that a monthly dietary for the hospitals, as is now being submitted, impresses me as a most excellent plan, and I hope that the practice will be continued. It will, I am sure, result advantageously on all sides. Of course it will take some time to arrive at the best possible results.

Yours very truly,

ELEONORA KINNICUTT.

Hon. P. M. WISE, M. D., *President State Commission in Lunacy,*
No. 1 Madison avenue, New York City.

STATE OF NEW YORK — MANHATTAN STATE HOSPITAL.

Criticism as requested by the President of the State Commission in Lunacy, Dr. Wise, on the Hospital Dietary for February, 1898.

Tuesday, February 1.—Too much salt for one day, and not sufficient nourishment.

Breakfast.—Oatmeal mush and syrup.

Monthly Conferences

Dinner.—Split pea soup, baked pork and beans, potatoes, pickles.

Supper.—Cold meat and sliced onions.

Wednesday, February 2.—Good.

Breakfast.—Hamburg steak or sausage and potatoes.

Dinner.—Beef stew, vegetables, bread pudding.

Supper.—Corn meal mush and syrup, apples.

Thursday, February 3.—Meagre dinner.

Breakfast.—Wheat flakes and syrup.

Dinner.—Corned beef and cabbage, potatoes.

Supper.—Ginger cake and stewed fruit.

Friday, February 4.—Two articles would seem to be sufficient for supper.

Breakfast.—Mackerel and potatoes.

Dinner.—Fresh fish, boiled onions, potatoes, apple pie.

Supper.—Cheese, stewed fruit, pickles.

Saturday, February 5.—Poor dinner.

Breakfast.—Oatmeal mush and syrup.

Dinner.—Vegetable soup, crackers, boiled rice and syrup.

Supper.—Beef stew.

No fresh meat during four days.

Sunday February 6.—Would suggest giving boiled custard for dinner, substituting cheese for supper.

Breakfast.—Corned beef hash.

Dinner.—Roast beef, potatoes, vegetables, rice pudding.

Supper.—Ginger cake and boiled custard.

Monday, February 7:

Breakfast.—Ham or shoulder.

Dinner.—Roast mutton, vegetables, potatoes.

Supper.—Macaroni with cheese.

On these two days there is meat for breakfast as well as two roasts following each other. During the five succeeding days no fresh meat.

Tuesday, February 8.—Too much salt, pork, pickles and cold pork for one day.

Breakfast.—Wheat flakes and syrup.

Dinner.—Bean soup, pork and cabbage, pickles.

Supper.—Pork and beans (cold), doughnuts.

Wednesday, February 9.—Macaroni with tomatoes, better dinner than supper-dish.

Breakfast.—Fried salt pork, gravy, potatoes.

Dinner.—Mutton pot-pie with dumplings, potatoes, tapioca pudding.

Supper.—Macaroni with tomatoes.

Thursday, February 10.—Meagre day with Friday to follow. No meat at either breakfast or supper.

Monthly Conferences

Breakfast.—Corn meal mush and syrup.

Dinner.—Corned beef and cabbage, potatoes, bread pudding.

Supper.—Ginger cake, apple sauce.

Friday, February 11.—Two articles would seem to be sufficient for supper.

Breakfast.—Salt salmon, stewed potatoes.

Dinner.—Fresh fish, vegetables, potatoes, apple or lemon pie.

Supper.—Cheese, stewed fruit, pickles.

Saturday, February 12.—Poor dinner; sausage and pork, no fresh meat or vegetables.

Breakfast.—Sausage.

Dinner.—Vegetable soup, crackers, boiled rice with syrup.

Supper.—Fried liver and pork.

Sunday, February 13.—Good.

Breakfast.—Oatmeal and syrup.

Dinner.—Roast beef, canned corn, potatoes, rice pudding.

Supper.—Ginger cake, stewed fruit.

Monday, February 14.—Would suggest giving boiled custard for dinner, substituting cheese for supper.

Breakfast.—Hash.

Dinner.—Mutton stew, sauerkraut, potatoes.

Supper.—Currant bread and boiled custard.

Tuesday, February 15.—No fresh meat all day.

Breakfast.—Hominy and syrup.

Dinner.—Split pea soup, pork and beans, cold slaw, corn starch pudding.

Supper.—Macaroni and cheese.

Wednesday, February 16.—Corn meal mush, syrup and pickles; poor combination for supper.

Breakfast.—Fried mackerel, stewed potatoes.

Dinner.—Roast mutton, bread pudding, vegetables.

Supper.—Corn meal mush, syrup, pickles.

Thursday, February 17.—Poor dinner, no fresh meat all day.

Breakfast.—Oat flakes and syrup.

Dinner.—Corned beef, cabbage, potatoes, johnny cake.

Supper.—Ginger cake, stewed fruit.

Friday, February 18.—Boiled eggs do not go so far as eggs in other forms, and require to be fresher.

Breakfast.—Oatmeal mush, syrup, two boiled eggs.

Dinner.—Fresh fish, potatoes, vegetables, rice pudding.

Supper.—Ginger cookies, cheese.

During three days again no fresh meat.

Saturday, February 19.—Poor dinner.

Breakfast.—Hominy and syrup.

Dinner.—Vegetable soup, crackers, boiled rice and syrup.

Monthly Conferences

Supper.—Beef stew.

Sunday, February 20.—Beef two meals running; would suggest transferring breakfast hash to a salt meat dinner.

Breakfast.—Fresh beef hash.

Dinner.—Roast beef, potatoes, canned corn, tapioca pudding.

Supper.—Ginger cake, apple sauce.

Monday, February 21.—Why are workers considered only here? Celery expensive; cold slaw and celery too much alike for one meal.

Breakfast.—Oatmeal mush and syrup, eggs for workers.

Dinner.—Boiled mutton, celery sauce, potatoes, cold slaw.

Supper.—Cold meat and onions.

Tuesday, February 22.—No potatoes nor vegetables for dinner. Beans twice on same day.

Breakfast.—Creamed codfish, boiled potatoes.

Dinner.—Bean soup, roast beef, boiled rice.

Supper.—Baked pork and beans (cold).

Wednesday, February 23.—Meagre day.

Breakfast.—Corn meal mush.

Dinner.—Fresh fish, potatoes, rice pudding.

Supper.—Macaroni and cheese.

Thursday, February 24.—Canned peas inappropriate for supper.

Breakfast.—Ham or shoulder.

Dinner.—Corned beef, cabbage, potatoes, cottage pudding.

Supper.—Coffee cake, canned peas.

Friday, February 25.—Too much for supper.

Breakfast.—Boiled mackerel, stewed potatoes.

Dinner.—Oysters, crackers, cold slaw, celery, apple pie.

Supper.—Cheese, pickles, stewed fruit.

Saturday, February 26.—Poor dinner.

Breakfast.—Hash.

Dinner.—Vegetable soup, boiled rice, crackers.

Supper.—Beef stew.

Sunday, February 27.—Too much for supper.

Breakfast.—Wheat flakes and syrup.

Dinner.—Roast beef, potatoes, vegetables, rice pudding.

Supper.—Ginger cake, canned fruit, cold meat.

February 23d, 24th, 25th and 26th, no fresh meat.

Monday, February 28.—Two roasts following each other.

Breakfast.—Oatmeal mush and syrup.

Dinner.—Pot roast beef, vegetables, potatoes.

Supper.—Head cheese and mustard.

Monthly Conferences

Dr. Blumer moved that the thanks of the conference be conveyed to Mrs. Kinnicutt for her intelligent criticisms and thoughtful suggestions, and that she be requested to prepare a dietary for the state hospitals for the month of March. Carried.

Dr. Dewing moved that the chairman appoint a committee of three superintendents, of which he himself shall be a member, to prepare a dietary for such a period as he shall select, six months or under, beginning with the first of April, and that it shall be submitted before the estimate is prepared for the month of April, and that the estimates thereafter shall be prepared in accordance with that dietary. Seconded.

Dr. Mahon stated that he desired to vote against that resolution for the reason that it seemed to him that a dietary prepared for each month until the different hospitals have each had a chance to formulate a dietary would result in an experience that would be more valuable to the state than attempting to get one up for six months in advance.

The motion was lost.

After a further discussion of the matter of dietaries, Dr. Hurd offered the following resolution: That a committee be appointed by the chairman to prepare a suggested dietary for three months from April 1st, to be submitted to the conference, with the understanding that the superintendents are to have copies in advance and are to make their suggestions. Carried.

The chairman stated that if a ration table were ever created, it would be created on the basis of past experience. For instance, take the consumption for a year or two years past and divide it by the number of people supported, and the ration table would be made up from the result. He thought this plan must seem eminently fair to the members of the conference.

The chairman appointed as the committee to prepare the suggested dietary for three months from April 1st, Drs. Pilgrim, Talcott and Dewing.

On motion, adjourned.

Monthly Conferences

STATE HOSPITALS—MARCH ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of State Hospitals and the Commission, held February 28, 1898:

Present.—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D. medical superintendent; Willard State Hospital, W. A. Macy, M. D. medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, S. H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, Oliver M. Dewing, M. D., general superintendent; Manhattan State Hospital, E. C. Dent, M. D., medical superintendent.

President Wise, chairman.

The chairman submitted to the conference the report of the committee of stewards on purchase of tea, farinaceous foods and salt fish.

The chairman suggested that the report be considered in sections.

Dr. Mabon moved that that portion of the report relating to tea be accepted and adopted, and that the contractor, W. J. Butterfield, of No. 87 Front street, New York city, be notified of the acceptance of the contract, and that the chairman of the committee be authorized to execute the contract on behalf of the hospital managers, whose representatives they are. Carried unanimously.

Dr. Pilgrim moved that for comparative test a sample of the monthly allowance of tea which each hospital receives be sent to Mr. Joseph H. Lester, of No. 97 Wall street, New York city, in order to ascertain whether it is of the same quality.

Dr. Mabon stated that he would second the motion, but desired to say that he understood from the chairman of the committee

Monthly Conferences

that Mr. Lester did not care to undertake the task of testing the tea for the state hospitals; that he made this test as a favor, and he would suggest that some other expert be substituted in his place.

Dr. Pilgrim said that he would amend his motion to provide for a test by Mr. Lester or some other expert to be appointed by the committee.

Adopted.

In reply to an inquiry of Dr. Mabon, the chairman said that each hospital would bear its proportionate share of the expense of testing, which would, of course, be a small matter.

The matter of farinaceous foods was considered.

After a lengthy discussion of the subject, particularly as to the advisability of the purchase of the macaroni, which some thought to be of inferior quality, Dr. Howard moved that the report of the committee be adopted, and contracts entered into, as recommended by the committee, for the month of March.

The motion was seconded by Dr. Blumer.

Dr. Mabon moved, as an amendment, that macaroni be excepted from this contract on the ground that it is inferior to quality the hospitals had been in the habit of buying.

The amendment was seconded and carried.

The motion as amended was unanimously adopted.

Dr. Hurd moved that the stewards be instructed to get quotations on the articles mentioned in this report in detail for comparison. Seconded.

After considerable discussion, the motion was put and declared lost.

The matter of salt fish was next taken up.

Dr. Mabon moved that the recommendation of the committee of stewards be accepted and adopted, with the proviso that they furnish whatever quantities of Labrador salmon trout or salt white fish the hospitals may specify they require, and at a price to be affected only by the freight rates. Carried.

The chairman brought to the attention of the conference the resolution of the meeting of stewards held January 20, 1898,

Monthly Conferences

which was considered at the last conference of superintendents and action thereon deferred, as follows:

Resolved, That the stewards recommend that flour may be purchased of a lower grade than the No. 1 Minnesota spring patents from hard spring wheat, and that flour from winter wheat may be used when found to be satisfactory as to quality and as economical in price.

Commissioner Brown suggested that the superintendents adopt a resolution specifying the grade of flour, as it seemed to him it obviously would not do for one hospital to use No. 1 and another one No. 2; that if the No. 2 was good enough for one hospital it was good enough for all. He felt perfectly satisfied from the inquiries he had made in regard to flour that the hospitals were using a better grade of flour than the leading hotels of New York city. If that was true, he did not think it worth while for the state hospitals to estimate for this higher and more expensive grade of flour, as he understood from reliable sources that the first grade contained no more nutriment than the second grade. He would suggest that a resolution be adopted that the hospitals use No. 1 spring wheat flour, second patent.

Dr. Howard recommended that the hospitals purchase No. 1 winter wheat flour; that spring wheat was not grown in New York state, and when the word "spring" was used, it followed that New York state wheat was debarred.

Dr. Pilgrim suggested that if No. 1 wheat was specified, the difficulty would be overcome, to which Dr. Howard agreed.

After some further discussion, Commissioner Brown offered the following resolution:

Resolved, That the chairman appoint a committee of three superintendents to report at the next conference on the various brands and grades of flour, in order that intelligent action might be taken on the subject.

Carried.

The chairman appointed as such committee Drs. Howard, Hurd and Blumer.

Dr. Howard asked that Commissioner Parkhurst act ex officio as a member of the committee.

Monthly Conferences

Dr. Hurd submitted the following report as committee to test the value of H-O Dairy Feed:

STATE OF NEW YORK—BUFFALO STATE HOSPITAL,

BUFFALO, N. Y., Feb. 26, 1898.

In the Matter of Testing H-O Dairy Feed.

To the Conference:

The steward of the Buffalo state hospital, appointed under the resolution of the conference of superintendents, January 26th, to secure a supply of H-O Dairy Feed and make a thorough trial, respectfully reports the following:

After consulting with the chemist of the H-O Co., three cows were selected from our herd for this trial, and beginning February 2d, on the old feed with rations as follows: Ensilage 40 lbs., middlings 10 lbs., oil meal 2 lbs. for each cow per day. The results were as follows:

Feb. 2, Total milk produced by the three cows..	80½ lbs.
Feb. 3, Total milk produced by the three cows..	78½ lbs.
Feb. 4, Total milk produced by the three cows..	80 lbs.
Feb. 5, Total milk produced by the three cows..	78 lbs.
Feb. 6, Total milk produced by the three cows..	81 lbs.
Feb. 7, Total milk produced by the three cows..	79 lbs.

Making a total production for the three cows of. 447 pounds, or
An average for the six days of..... 79.5 pounds.

The time from February 8th to 16th inclusive, was taken to make the change from the old feed (middlings and oil meal) to H-O Dairy Feed, the change being made after feeding half of old and half of H-O for three days, quarter of old and three-quarters of H-O for three days more, and then placing them on full feed of 12 lbs. each per day of H-O feed, the results of which the following will show:

Feb. 17, Total milk produced by the three cows.	82½ lbs.
Feb. 18, Total milk produced by the three cows.	83½ lbs.
Feb. 19, Total milk produced by the three cows.	80½ lbs.
Feb. 20, Total milk produced by the three cows.	78 lbs.
Feb. 21, Total milk produced by the three cows.	77 lbs.
Feb. 22, Total milk produced by the three cows.	77½ lbs.

Making a total production for the three cows of. 478½ pounds, or
An average for the six days of..... 79.75 pounds.

Monthly Conferences

Continuing the test for three days more it shows the following:
 Feb. 23, Total milk produced by the three cows. 78½ lbs.
 Feb. 24, Total milk produced by the three cows. 80½ lbs.
 Feb. 25, Total milk produced by the three cows. 82½ lbs.

Making a total for nine days for the three cows

of 719¾ pounds, or
 A daily average for nine days of..... 79.97 pounds.

In computing the cost of the above feeds, I find that middlings at \$14 per ton and oil meal at \$24.50 per ton, equals exactly that of H-O Dairy Feed at \$15.75 per ton, namely, \$1.701 being the total cost of either feed for three cows for six days with rations of 12 lbs. each per day, but with the average cost of middlings and oil meal I feel satisfied that there is nothing to be gained in changing to the H-O Dairy Feed, unless it might be beneficial to the health of a herd to change from the monotony of the same feed occasionally, the difference in the production of milk being less than one pound per day on a daily average from three cows for the time above reported.

Respectfully submitted,

THOMAS WILDING,

Steward.

On motion of Dr. Howard the report was adopted

Dr. Howard presented the following report as committee to experiment with the use of paper napkins and report.

STATE OF NEW YORK—ROCHESTER STATE HOSPITAL,

February 28, 1898.

To the Conference:

Gentlemen.—As committee on paper napkins I beg leave to report that as directed by the conference of December 30, 1897, a trial of paper napkins is being made at the Rochester Hospital. It is demonstrated thereby that for one-third of the patients and for all of the employees for one year, paper napkins 14 in. by 14 in. would cost about \$146. In addition thereto linen napkins would be needed for tray-service for sick persons and for officers' use, bringing the cost up to about \$200.

The annual cost for linen napkins for all purposes has not exceeded \$150.

The protection afforded the clothing of patients by the linen napkins is much better than by the paper napkins and the extra

Monthly Conferences

laundering of clothing necessitated by the use of paper napkins would counterbalance the expense and labor of the regular laundering of linen napkins.

The use of paper napkins in state hospitals is not recommended.

Respectfully submitted,

E. H. HOWARD,
Committee.

On motion of Dr. Talcott the report was accepted and adopted.

Dr. Howard submitted the following report of the committee on dress goods.

February 24, 1898.

To the Conference:

Gentlemen.—Your committee recommends that goods should be plain, durable and washable, cheap prints with fast running colors being objectionable in every way. There should be two general classes of goods, a heavier weight for the better class of patients and for entertainments, church Sundays, and a lighter weight for ordinary everyday wear, more especially in warmer weather.

The committee has received samples of dress goods, heavy and light, from all the hospitals and taking into consideration the appearance of the patients and the durability of the goods in use as represented by these samples, we recommend for the heavier goods cashmeres to cost $16\frac{1}{2}$ cents a yard for 33 in. goods.

For the lighter goods we recommend varieties of seersucker, 26 in. and sateens, $30\frac{1}{2}$ in. at 8 cents a yard; also percales, 36 in. at 10 cents a yard.

For strong dresses we recommend a blue and white checked gingham, 29 in. special order to be filled by the manufacturer according to the sample to be furnished by the committee at $12\frac{1}{2}$ cents a yard.

The samples represented by the committee are simply for the purpose of indicating grades, the varieties, styles, etc., are to be left to individual choice.

RECAPITULATION.

First grade dresses to be of cashmere or its equivalent, not to exceed $16\frac{1}{2}$ cents a yard.

Second grade dresses to be of percales or their equivalent, not to exceed 10 cents per yard.

Monthly Conferences

Third grade dresses to be of seersuckers or their equivalent, not to exceed 8 cents per yard.

Strong dresses, "special check" gingham, 29 in. not to exceed 12½ cents a yard.

Cheaper grades of goods we do not consider economical to buy as they are not durable.

E. H. HOWARD,
A. W. HURD,
Committee.

A lengthy discussion followed in regard to the details of the report.

On motion of Dr. Macy, the report was accepted.

Dr. Mabon moved that the committee be continued and be authorized to enter into contract for the necessary dress goods for all the women patients of all the hospitals for six months from April 1, 1898.

The ayes and noes were called, and the motion declared unanimously adopted.

Dr. Mabon submitted the report of the committee appointed at the last conference to examine into and report to what extent proposals may be solicited for the supply of articles for six months from the first of April for the state hospital system, and to submit a form of specifications therefor.

REPORT OF COMMITTEE ON JOINT PURCHASE OF SUPPLIES.*To the Conference:*

Gentlemen.—At a meeting of the conference held on January 27, 1898, a committee was appointed, on motion, to determine to what extent joint proposals might be invited for state hospital supplies, to specify severally such articles as might in its judgment be thus purchased advantageously, to prepare a suitable form of advertisement, specification and proposal and to report its conclusions at the next conference following. This action was had under section 44 of article II of chapter 545 of the laws of 1896, which contains the following provision: "Contracts may be entered into jointly, by the representatives of the managers of two or more of the state hospitals, for such staple articles of supply as it may be found feasible, by the Commission, for the hospitals to purchase in bulk under such contracts. Such con-

Monthly Conferences

tracts shall not be let except in conformity with the provisions of this act relating to estimates. Such contracts shall be executed by one of such representatives of the managers to be designated by them. The state hospitals may manufacture such supplies and materials to be used in any of such hospitals as can be economically made therein."

Pursuant to appointment and instructions, the undersigned met in Albany on Monday and Tuesday, February 7 and 8, 1898, in the office of the State Commission in Lunacy, where they had the benefit of the experienced counsel of Auditor George D. Sanford.

The conference is, of course, aware that numerous articles of supply have already been furnished under a scheme of co-operation. Witness, for instance, the following among others: Coffee, tea, spices, certain drugs and oils; crockery and glassware; blankets and towels; boiler insurance; fire extinguishers; brushes, brooms, mats, combs, buttons, stockings, harness; stationery supplies, printing, bookbinding; bread tins; toilet paper; electric lamps. Moreover a soap plant to subserve the general purposes of the service is undergoing erection at the Rochester State Hospital. The conference knows also that the several hospitals, each in its own way, are engaged in manufacturing for their own purposes, and that clothing, including head and foot wear, is thus provided for patients. And where state hospital industries fail to supply material needs locally or from a sister institution, purchases (as in the case of bedsteads and other furniture) are made from the prison department, as prescribed by the statute. The question having arisen as to the extent to which this policy, conceived manifestly in the interest of the service and withal sound commercially, might be susceptible of extension and in such wider application enure to further efficiency and economy, your committee analyzed very carefully an alphabetical list of supplies purchased by the hospitals during a period of several years, item by item, and noted such articles as in its judgment might probably be bought more advantageously under joint contract. It was deemed best to hasten slowly in a matter of such great moment and to suggest to the conference that future action be based upon the practical experience acquired as the result of this first tentative work. The following list is therefore respectfully submitted as embodying articles concerning which there is not likely to arise grave difference of opinion: Beans, cornmeal, crackers, hair, hominy, lard, lead, nails, oatmeal, oil (linseed), peas, prunes, raisins, rice, salmon (canned), salt, soap, syrup, turpentine, macaroni, molasses, painters' supplies, tapioca, tea, vinegar, whiskey, window glass, zinc. Accompanying this report will be found specifications relating to each one of the articles

Monthly Conferences

here enumerated, together with a form of advertisement and proposal.

The suggestion is made that, in view of the large dealings of the Utica State Hospital in stationery supplies, arrangements might be made to supply all kinds of paper from that institution or directly from the jobbers with whom it deals. Mackerel and cod, it was thought, should be contracted for in June after the summer catch. The suggestion is also made that a special committee on leather and shoe findings be appointed to report to the conference. With respect to drygoods and clothing, your committee would advise that the conference await the report of the committee on clothing. It might also be well for the conference to appoint a committee to select samples from last year's styles. As regards whiskey for medicinal use, your committee would recommend that steps be taken looking to the purchase of new whiskey in quantity, to be bonded for four years and withdrawn as occasion may require. An amount might be added each year equal to the amount thus withdrawn from stock. In this way it would be possible to obtain whiskey of uniform age and quality and at a considerable saving over present methods.

Mixed paints vary to such an extent in quality as to make specifications therefor impossible. It is, therefore, recommended that the mixing of the crude materials, occur at the several hospitals so far as this may be practicable.

Your committee would further report that it seems impracticable, on account of the exigency of freight and local conditions as to cold storage, to enter into joint contract for western beef; and it is informed that no better rates for flour can be obtained by making purchase in quantities larger than carload lots.

Respectfully submitted,

WM. MABON,

E. H. HOWARD,

G. A. BLUMER,

Committee.

SPECIFICATIONS FOR SUPPLIES FOR THE NEW YORK STATE HOSPITALS.

As the following specifications must be accepted by bidders and made a part of their proposal and any contract executed thereunder, particular attention is invited thereto. Each bid must be accompanied by a certified check payable to the committee on purchase of supplies, which check shall not be for less

Monthly Conferences

than five per centum on the amount of supplies proposed to be furnished, and shall be forfeited to the state in case any bidder receiving an award shall fail to execute promptly a contract, with good and sufficient sureties, according to the terms of his bid; otherwise to be returned to the bidder. Bids unaccompanied by a certified check will not be considered.

Bidders are required to furnish samples of articles bid for as may be specified. In all cases where samples are required they must be delivered to the committee at such time and place as may be designated by it. Bids must not be inclosed in packages containing samples. Samples will not be opened until after all the bids shall have been read.

Separate bids must be made for each and every article, as award will be made for each article separately. The committee reserves the right to reject any or all bids or to accept bids for such articles as may be deemed desirable.

Selections may be made from samples as well as prices.

In making awards, the right will be reserved to increase or diminish to any extent the quantity of any article embraced in the accompanying schedule, and the further right to increase or diminish the quantity specified in any contract to an extent not exceeding 25 per centum. Parties desiring to limit the quantities offered of any article must state in their bids the quantities proposed to be furnished, followed by the word "only," and the right will be reserved to accept any part thereof, not exceeding the amount designated.

A joint and several bond, in the full amount of the contract, duly executed, with two or more sureties, and conditions for the faithful performance of the contract in all its particulars, must accompany the same. The sufficiency of the sureties must be evidenced by their affidavit as to the value of their property.

It is desirable that only one member of a firm sign the bid and propose to enter into the contract, thus avoiding the necessity of producing powers of attorney authorizing one member to sign for absent members, as required by law.

All articles furnished under contract must be delivered at the places designated for their reception, strongly packed and marked according to directions for shipment without any charge therefor or for cases, baling or sacks, and will be subject to inspection; and any articles that may in any respect fail to conform to the samples upon which the award was made will be rejected, and the contractor held to furnish others of the required quality within five days, or failing in that, they will be purchased at his expense.

Monthly Conferences

ADVERTISEMENT.

On or before noon 189.., sealed proposals will be received for sundry supplies for state hospitals. Specifications may be obtained by addressing any of the following state hospitals:

Utica State Hospital, Utica, N. Y.; Hudson River State Hospital, Poughkeepsie, N. Y.; Willard State Hospital, Willard, N. Y.; Middletown State Homeopathic Hospital, Middletown, N. Y.; Buffalo State Hospital, Buffalo, N. Y.; Binghamton State Hospital, Binghamton, N. Y.; St. Lawrence State Hospital, Ogdensburg, N. Y.; Rochester State Hospital, Rochester, N. Y.; Long Island State Hospital, Kings Park, N. Y.; Manhattan State Hospital, Ward's Island, New York city.

Supplementing the report Dr. Mabon stated that the committee met on February 7th and 8th, and that the report had been printed and submitted to the different superintendents and also to the Commission. There were some suggestions he had to make as a result of communications that had been received from other superintendents, so as to modify the report to a certain extent. In the first place, Dr. Pilgrim wrote him asking whether this system could be extended to other articles than those specified, to which he replied that it could, as he understood it, and since then he had thought it possible that rye flour, graham flour, corn-starch, farina and barley might be added as being articles of farinaceous foods that might be purchased under general contract. Dr. Pilgrim also wanted to know whether specifications for contracts could be made for articles separately or collectively, and whether certain articles in the same line should be combined under one contract. This he thought was a matter for discussion. In regard to shipping directions the committee had tried to make them as full as possible; but should contracts be entered into each hospital could give the necessary directions.

There might be some question about the certified check clause. It did not seem to be explicit. Incorporated in the articles to be purchased under general contract the item of crackers appears. That was placed there by mistake. The committee make a recommendation that they should be purchased of manufacturers in the immediate vicinity. There is practically a combination of all the cracker dealers, and it would not do any good to enter into a contract. Beans also should not be included; but should be purchased in the neighborhood of the hospitals. Macaroni, it seemed to him, might be purchased directly from manufacturers. In regard to the matter of whiskey, they had the following in the report: "As regards whiskey for medicinal use, your committee would recommend that steps be taken looking to

Monthly Conferences

the purchase of whiskey in quantity, to be bonded for four years and withdrawn as occasion may require. An amount might be added each year to the amount thus withdrawn from stock. In this way it would be possible to obtain whiskey of uniform age and quality and at a considerable saving over present methods." He would suggest that the word "equal," should be inserted after the word "year," thus making it read "An amount might be added each year equal to the amount thus withdrawn from stock." On page 3, in the "Advertisement," after the words "sealed proposals" insert "good for days," making it read "On or before noon 189 , sealed proposals good for days will be received for sundry supplies for state hospitals," after which also insert the following "at". On page 5, in regard to lard, oatmeal, salmon and salt, it would seem best that the brands should be specified. Since the committee met, there has been a combination in the salt business, so that we thought salt might appropriately be taken out of the list of articles, as the combination was such that there would be a standard price on salt. These were the only changes the committee thought necessary at present, with the addition of rye flour, graham flour and barley, the omission of beans, crackers and macaroni, and specifying the brands of lard, oatmeal, salmon, and perhaps removing salt from the articles that can be purchased, and if this report should be accepted and adopted, as amended, at the end of six months it would be possible to understand whether the plan would be feasible and advisable. They had included as many articles as they thought best by reason of the fact that this is an experimental question.

Dr. Macy moved that the report of the committee be accepted and adopted, and that a committee be appointed authorized to go ahead and perfect the specifications in the line of Dr. Mabon's suggestions, and to make a contract for six months' supply.

Carried.

Dr. Howard moved that a committee of one steward and one superintendent be appointed by the chair to consummate this joint purchase.

The ayes and noes were called on this motion, and it was declared carried unanimously.

It was understood that this committee was to carry out all the details provided in the specifications, and to make these purchases.

Monthly Conferences

The chairman appointed as such committee Superintendent Mabon and Steward Cole.

Mr. Challen was allowed five minutes in which to bring to the attention of the conference Green's modern fuel economizer.

Dr. Pilgrim presented the following report of the committee on dietary for the months of April, May and June, 1898.

The committee of medical superintendents on dietary, to whom the question of a basic dietary for the months of April, May and June was referred by the conference of medical superintendents held January 27, 1898, would respectfully make the following report:

First.—As the question of cost must constantly be kept in mind, we have endeavored to recommend a dietary which will come within the limits recommended by Dr. Flint. For that reason the recommendation that poultry should be used weekly or bi-weekly has not been adopted. Puddings have only been specified on an average of every other day, as the allowance of milk is not sufficient for their more frequent use. Boiled cereals are recommended on alternate days on account of their greater economy in the use of milk, butter, eggs, sugar, etc. In this connection we would recommend that where the regular allowance of milk is not sufficient for the requirements of any hospital, that such hospital be permitted to substitute milk for meat, butter, cheese or eggs in quantities sufficient to balance the money value of the articles so dropped.

Second.—For dinner for April but one vegetable is to be used in addition to potatoes, and the choice may lie with the superintendents of the various hospitals. Later in the season, when the garden supplies become more abundant, an increase may be made proportionate to the supplies.

Third.—Cold meat should be given to workers at supper on every working day. The term "workers," when used in this dietary, shall be taken to mean patients who are engaged in active muscular work during the greater part of the working hours of the day.

Fourth.—Where meats or fish are specified for breakfast, they are intended only for workers and employees, as a cereal breakfast is considered more suitable for the feeble and idle and those who do not require special diet for medical reasons.

Fifth.—For May and June the changes will be in the substitution of veal for beef in the option of the superintendents, and a greater freedom in the use of vegetables and fruit in accordance with the farm and garden supplies.

Monthly Conferences

Sixth.—Puddings may be alternated in the discretion of the superintendent.

Seventh.—A reduction in the allowance of butter from two to one and one-half ounces per capita is recommended, with the substitution of an allowance of Coto-suet or lard sufficient for cooking purposes. The saving effected in this way may be used for increasing the supply of milk where the usual allowance is found to be insufficient.

Eighth.—It is recommended that as much variety as possible be made in the bread by furnishing white, brown, rye, etc., instead of white only as is the general practice.

Ninth.—Poultry, eggs, oysters, clams, etc., except when specified for general use, are to be estimated for as special diet, but the total amount of meats, including the special articles, should not exceed the per capita allowance of twelve ounces.

Tenth.—The acute and hospital cases are to be supplied with suitable additions to this basic dietary, including meats, eggs, milk and fresh fruits, by special orders of attending physicians.

CHAS. W. PILGRIM,

SELDEN H. TALCOTT,

OLIVER M. DEWING,

Committee of Medical Superintendents.

Friday, April 1.

Breakfast.—Mackerel and potatoes for workers; oatmeal and milk or syrup for others; bread and butter, coffee.

Dinner.—Fresh fish, potatoes, macaroni with cheese, bread, steamed spice pudding with sauce.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Saturday, April 2.

Breakfast.—Liver for workers; hominy and syrup for others; bread, butter, coffee.

Dinner.—Roast beef, brown gravy, potatoes, boiled rice, pickles; bread.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Sunday, April 3.

Breakfast.—Hash, bread, butter, coffee.

Dinner.—Boiled ham, sliced potatoes, apple pie and cheese, bread, butter, coffee for men, tea for women.

Supper.—Molasses cake, cheese, bread, butter, tea.

Monthly Conferences

Monday, April 4.

Breakfast.—Cold meat for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Beef stew, carrots, boiled farina, bread.

Supper.—Fruit or sauce, bread, butter, tea. Pork and beans for workers.

Tuesday, April 5.

Breakfast.—Sausage for workers; corn meal mush and syrup for others; bread, butter, coffee.

Dinner.—Roast mutton with gravy, potatoes, canned tomatoes, bread, oatmeal pudding.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Wednesday, April 6.

Breakfast.—Shoulder (cold) for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Vegetable soup with shredded meat, potatoes, bread, bread pudding.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Thursday, April 7.

Breakfast.—Pork stew for workers; hominy and syrup for others; bread, butter, coffee.

Dinner.—Corned beef and cabbage, potatoes, boiled rice, bread.

Supper.—Cinnamon bread, cheese, bread, butter, tea. Cold meat for workers.

Good Friday, April 8.

Breakfast.—Creamed codfish, potatoes, bread, butter, coffee.

Dinner.—Fresh fish, potatoes, pickled beets, corn starch pudding.

Supper.—Hot X buns, fruit or sauce, bread, butter, tea.

Saturday, April 9.

Breakfast.—Hash, bread, butter, coffee.

Dinner.—Mutton pot-pie, potatoes, onions, bread, boiled farina.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Easter Sunday, April 10.

Breakfast.—Boiled eggs (two each), farina, syrup, bread, butter, coffee.

Dinner.—Oyster stew, crackers, potatoes, bread, butter, tapioca pudding; coffee for men, tea for women.

Supper.—Fruit or sauce, bread, butter, tea.

Monthly Conferences

Monday, April 11.

Breakfast.—Smoked salmon, oatmeal and milk or syrup, bread, butter, coffee.

Dinner.—Pot roast, gravy, potatoes, carrots, bread, boiled rice.

Supper.—Bread, butter, ginger bread, cheese, tea. Cold meat for workers.

Tuesday, April 12.

Breakfast.—Sausage for workers; wheat flakes and syrup for others; bread, butter, coffee.

Dinner.—Mutton stew, potatoes, onions, bread, sago pudding.

Supper.—Currant biscuit, fruit or sauce, bread, butter, tea. Cold meat for workers.

Wednesday, April 13.

Breakfast.—Hamburg steak or beefsteak for workers; hominy and syrup for others; bread, butter, coffee.

Dinner.—Corned beef and cabbage, potatoes, bread, butter, parsnips, boiled farina.

Supper.—Ginger cake, cheese, bread, butter, tea. Cold meat for workers.

Thursday, April 14.

Breakfast.—Corned beef hash, bread, butter, coffee.

Dinner.—Vegetable soup with meat, potatoes, turnips, bread pudding.

Supper.—Johnny-cake, syrup, bread, butter, tea, cold meat for workers.

Friday, April 15.

Breakfast.—Eggs, potatoes, bread, butter, coffee.

Dinner.—Fresh fish, potatoes, canned peas, pickles, bread, boiled rice.

Supper.—Bread, butter, ginger bread, cheese, tea. Cold meat for workers.

Saturday, April 16.

Breakfast.—Beef stew for workers; hominy and syrup for others; bread, butter, coffee.

Dinner.—Boiled beef, potatoes, onions, bread, tapioca pudding.

Supper.—Coffee cake, cheese, bread, butter, tea. Cold meat for workers.

Sunday, April 17.

Breakfast.—Wheat flakes and milk or syrup, bread, butter, coffee.

Dinner.—Roast beef, gravy, potatoes, succotash, bread, butter, coffee for men, tea for women, boiled farina.

Supper.—Fruit or sauce, bread, butter, tea.

Monthly Conferences**Monday, April 18.**

Breakfast.—Sliced shoulder for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Mutton stew, potatoes, turnips, spiced pudding.

Supper.—Johnny-cake, syrup, bread, butter, tea. Cold meat for workers.

Tuesday, April 19.

Breakfast.—Eggs for workers, farina and syrup, bread, butter, coffee.

Dinner.—Corned beef and cabbage, potatoes, bread, boiled rice and syrup or milk.

Supper.—Baked beans (cold), bread, butter, tea. Cold meat for workers.

Wednesday, April 20.

Breakfast.—Hash, bread, butter, coffee.

Dinner.—Vegetable soup with meat, potatoes, canned corn, bread pudding.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Thursday, April 21.

Breakfast.—Hamburg steak or beefsteak for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Roast beef, gravy, potatoes, boiled parsnips, boiled farina.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Friday, April 22.

Breakfast.—Codfish balls, potatoes, bread, butter, coffee.

Dinner.—Fresh fish, potatoes, pickled beets, bread, rice pudding.

Supper.—Dried herring, bread, butter, cake, cheese, tea.

Saturday, April 23.

Breakfast.—Eggs for workers; hominy and syrup for others; bread, butter, coffee.

Dinner.—Boiled beef, potatoes, parsnips, barley soup, bread.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Sunday, April 24.

Breakfast.—Smoked salmon, stewed potatoes, bread, butter, coffee.

Dinner.—Roast mutton, potatoes, canned peas, apple pie, cheese, bread, butter, coffee for men, tea for women.

Supper.—Fruit or sauce, bread, butter, tea.

Monthly Conferences**Monday, April 25.**

Breakfast.—Hash, bread, butter, coffee.

Dinner.—Pot roast, gravy, potatoes, bread, macaroni, cheese.

Supper.—Bread, butter, Johnny-cake, syrup, tea. Cold meat for workers.

Tuesday, April 26.

Breakfast.—Cold sliced shoulder for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Beef stew, turnips, bread, baked Indian pudding.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Wednesday, April 27.

Breakfast.—Cold meat for workers; hominy and syrup for others; bread, butter coffee.

Dinner.—Roast mutton, canned corn, potatoes, bread, rice pudding.

Supper.—Bread, butter, currant biscuit, cheese, tea. Cold meat for workers.

Thursday, April 28.

Breakfast.—Liver for workers; oatmeal and milk or syrup for others; bread, butter, coffee.

Dinner.—Roast beef, brown gravy, spinach, potatoes, bread.

Supper.—Fruit or sauce, bread, butter, tea. Cold meat for workers.

Friday, April 29.

Breakfast.—Eggs for workers; wheat flakes and syrup for others; bread, butter, coffee.

Dinner.—Fresh fish, pickled beets, potatoes, tapioca pudding, bread.

Supper.—Cinnamon bread, butter, bread, tea. Cold meat for workers.

Saturday, April 30.

Breakfast.—Beef hash, oatmeal and syrup, bread, butter, coffee.

Dinner.—Vegetable soup with shredded meat, onions, potatoes, bread, rice pudding.

Supper.—Baked beans (cold), bread, butter, tea. Cold meat for workers.

Dr. Pilgrim stated that the only marked departure from previous dietaries was that on Sundays the committee had given the patients a little better dinner than usual, and had added coffee for the men and tea for the women and butter in addition to bread, and in allowing fish and meats in the morning to working

Monthly Conferences

patients only. Where meat and fish were specified, it was not intended to apply to the whole house, except in the case of hash, stews or something of that kind.

Dr. Macy thought that it was rather unfortunate that the superintendents had not had an opportunity to examine this dietary before they acted upon it.

The chairman said that the superintendents were requested to send their suggestions to the chairman of the committee which they did, or most of them did, and the chairman of the committee took the suggestions, and as far as possible, they were incorporated. It was, of course, impossible to incorporate all in the dietary, because the chairman said they were so many and conflicting, but so far as he could the report of the committee was modified to conform with these suggestions.

The report of the committee was adopted.

The chairman stated that he had learned that there was one man who was recognized universally, not only in this country but elsewhere, as an authority on dietaries and food supplies, and that was Prof. Atwater, of the Department of Agriculture of the United States Government, who resides at Middletown, Conn., and that with the consent of his colleagues, he had invited Prof. Atwater to give his assistance in establishing a dietary and ration table for the New York state hospitals. He had not yet received assurance that he was entirely willing to do it, but he looks upon it favorably and may do it. A provisional report would probably be ready by the end of the three months that the dietary just considered was intended to complete.

Referring to the dietary for the three months the chairman said that this was adopted upon the same basis as the previous dietaries, that if the hospitals wished to make a change, they would be at liberty to do so, but they should make a report in regard to the same, specifying the changes and the reasons therefor, at the end of the month, so that it might be made a matter of record.

Dr. Wagner inquired what was to be done about the March dietary. So far as their calculations went, it appears that it

Monthly Conferences

would cost about \$1 a month more per patient, or about \$1,700, if the dietary were carried out as recommended, than to carry out a dietary similar to the one in operation for the month of February.

The chairman stated that, notwithstanding the dietary, the hospitals would have to confine themselves to their allowances. Besides, it was understood that the dietary was a suggestive one. In regard to the expense, he had told Mrs. Kinnicutt that her dietary was anywhere from 10 to 20 per cent. more costly than previous dietaries, and she said that it was not true; that she had an estimate made of its cost and it was 16 cents a day, and she said that she thought that compared well with the cost of the previous dietary, and that the city, under the old system, received 17 cents a day. He did not know how she found out the cost, as Dr. Macdonald did not know what it cost under the old city system, or anybody else; nor did they know at the office of the commissioners of charities and correction. The commissioner had looked up the figures and found that in 1890 there was only \$608,000 expended on the New York city asylums for all purposes of whatever kind, and that they had an average of about 5,000 patients, which would allow only \$2.11 a week. If it cost them 17 cents a day for food supplies, that would be \$1.19, and would have allowed only 92 cents for all other purposes, including ordinary repairs, which was incredible, and could not be true.

Dr. Macy stated that he had figured out this matter during the past month for a period of twenty-five years, and found that provisions, which included food supplies, ranged from 14 cents and a fraction up to as high as 18 cents for a year at a time.

The chairman stated that the last year the city was under the old system, the latter half of the year, and this Dr. Macdonald had told him himself, they knew that they were going under the state system, and wanted to make a record, and they let the institutions have everything they wanted. They increased the cost of everything, and especially for food supplies, over 50 per cent. during the last six months, and that year should be left out of consideration entirely. It should also be borne in mind that

Monthly Conferences

for the period between 1889 and 1894 the cost of food supplies ranged from 25 to 50 per cent. higher than at the present time.

Dr. Macy stated that in the male department he did not think it was less than 16 or 17 cents a day in five years.

The chairman stated that there was no period previous to 1894 in which they subtracted the pay-roll from their whole expenditure, and then had left 17 cents a day for food supplies.

The chairman exhibited to the conference the Krag filing binders, which could be used in the hospitals in place of the ordinary case-book.

On motion of Dr. Pilgrim this form of file was adopted.

The chairman suggested that the hospitals use the file, size 8 inches by 11 inches, 3 inches thickness, and whole canvas.

Commissioner Brown called the attention of the conference to the fact that the last number of the *Forum* contained an article on the use of cotton-seed meal as feed for cattle, which stated that it had been demonstrated that the use of this article was not only very much cheaper, but very much more fattening than corn. He suggested that the superintendents take this matter under consideration.

Dr. Mabon suggested that this matter also be referred to Prof. Atwater, as he was also an authority on such matters.

The chairman read the following communication from Dr. Howard, under date of January 31, 1898, in the matter of bedding for cattle and horses, showing the relative cost of straw and shavings:

STATE OF NEW YORK—ROCHESTER STATE HOSPITAL,

January 31, 1898.

In the Matter of Bedding for Cattle and Horses—Straw vs. Shavings.

To the State Commission in Lunacy:

Upon making comparative test to determine the relative cost of straw and shavings for bedding cattle and horses, the following was found to be the result:

Monthly Conferences

Straw. —One week (7 days) cow stable, 600 lbs. at \$8 per ton.		\$2 40
Horse stable, 750 lbs. at \$8 per ton.		3 00
Total.		<u>\$5 40</u>
Shavings. —One week (7 days) cow stable, 28 bales, at 20 cents.		\$5 60
Horse stable, 33 bales, at 20 cents.		6 60
Total.		<u>\$12 20</u>
Cost of shavings for one week.		\$12 20
Cost of straw for one week.		5 40
Balance in favor of straw.		<u>\$6 80</u>

Consequently the saving in this section of the state by using straw instead of shavings is about 40 per cent.

Respectfully yours,

E. H. HOWARD,
Superintendent.

Commissioner Brown said that, notwithstanding Dr. Howard's testimony, he was not convinced that straw was cheaper than shavings. He had found in Massachusetts hospitals that straw was not used at all; that either shavings, sand or dry earth were used. The stables there and the cattle were in the best condition as to cleanliness, dryness, etc., that he had ever seen.

The chairman read to the conference a communication from Dr. Elizabeth Balch, of Yonkers, N. Y., requesting a position in a state hospital. He stated that she was eligible for appointment to the position of medical interne, and that she had called on him the other day, and he had said to her that he would bring the matter to the attention of the conference.

Commissioner Brown read the following communication from McClave, Brooks & Co., of Scranton, Pa., under date of February 14, 1898, relating to repairs to grates of their manufacture:

Monthly Conferences

SCRANTON, PA., *February 14, 1898.**To the State Commission in Lunacy, Albany, N. Y.:*

Gentlemen.—This is to notify you that the constructions known as the “McClave Grate” and “McClave’s Improved Grate” are fully protected by letters patent, and that we have the exclusive right to make and sell said grates in all the United States, excepting the territory described in the above-printed note. Therefore, any repairs for the above-described grates, which are in use at any of the state institutions under your charge, should be bought from us, and you will please accept this as a notice not to make or have made for use in said institutions or for others, any grate bars for said “McClave Grate” or “McClave’s Improved Grate.”

Yours truly,

McCLAVE, BROOKS & CO.

Several complaints in regard to the quality and cost of prison-made goods were made by members of the conference, and after a lengthy discussion, on motion of Dr. Mabon, Dr. Wagner and Dr. Pilgrim were appointed a committee to draft a protest to the superintendent of prisons against the quality of clothing and other articles now being manufactured for state hospitals, and to inquire into the matter of articles manufactured in prisons as to their comparative value and the prices charged, and to report to the next conference.

The chairman exhibited to the conference a sample of Applegate’s indelible ink, costing \$6 a pound, and stated that as a matter of experiment the hospital estimates would be revised so as to provide for the purchase of this ink for the month of March.

Dr. Pilgrim stated that the subject of hydrotherapeutics seemed to be attracting considerable attention in hospitals for the insane, and he thought it would be a good idea if Dr. Blumer would undertake some experiments on well defined lines and let the conference know the results. He said that the hospitals would probably all be asking for hydrotherapeutic equipment in the course of a few months, and it would be well to know something about it.

On motion of Dr. Pilgrim, Dr. Blumer was requested to make some investigation into the subject.

Monthly Conferences

The chairman called the attention of the conference of the desirability of the superintendents giving more attention to the card catalogue system. Thus far only three or four cards had been prepared by superintendents. He said that just at present he was preparing cards giving Prof. Atwater's tables of analyses of foods, under the headings of the different foods, so that hospital superintendents can refer to them.

On motion of Dr. Talcott, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

STATE HOSPITALS—APRIL ESTIMATES—189

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission held March 29, 1898:

Present.—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. A. Macy, M. D., medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, S. H. Talcott, M. D. medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. B. Potter, M. D., first assistant physician; Long Island State Hospital, H. C. Evarts, M. D., medical superintendent Kings Park Department; R. M. Elliott, M. D., medical superintendent Brooklyn Department; Manhattan State Hospital, A. E. Macdonald, M. D., general superintendent; Collins State Homeopathic Hospital, Daniel H. Arthur, M. D., medical superintendent.

Commissioner Wise, chairman.

Unfinished business:

The chairman stated that he understood Dr. Macdonald desired to make a statement in regard to the matter of the cost of food

Monthly Conferences

supplies, etc., at the Manhattan State Hospital, which was discussed by the conference at the last meeting, at which Dr. Macdonald was not present.

Dr. Macdonald said that the minutes of the previous conference contained some statements accredited to Dr. Wise which were made in error, and that he had spoken to Dr. Wise about it and he had suggested that he might bring the matter up before the conference at this meeting. Dr. Wise was reported as saying that Dr. Macdonald did not know what the cost of food in the city asylums was as in proportion to other expenses; that nobody else knew, and that the commissioners of charities did not know. He begged to say that he (Dr. Macdonald) did know, and had known for twenty-five or twenty-six years that he has been connected with the institution every month and every month of every year precisely what the food supplies cost, and that the knowledge was communicated to the commissioners every year and every month, and that the information had been exhibited to everyone who desired to procure it, and had been incorporated every year in the annual reports. He had the day before examined some twenty-four of these reports, and some twenty-four of the other reports to the board of apportionment, making some forty-eight in all, in which this matter of the cost of maintenance of patients in the New York city asylums is given in detail, and the cost of food apart from the cost of salaries, etc. He had brought up specimens of these reports, which would give the cost of provisions, salaries, etc., for the respective years they represented. Each year there was prepared a statement which went to the commissioners of charities and correction, and from them to the board of apportionment, asking for the appropriation for the coming year, and, in order to justify them, giving in even more explicit detail the exact cost of each article of provision, not down to the items, such as tea, coffee, etc., but giving some dozen different items. He submitted a summary of the cost for food each day for each patient for eleven years, while he was medical superintendent on Ward's Island, and stated that the same course had been pursued since he had been general superintendent, not only as to each of the four

Monthly Conferences

departments, but it had been summarized in the report of the general superintendent as applying to all four. He considered that one other statement accredited to Dr. Wise was in error, in saying that the cost of food supplies now as compared with the cost five years ago was from 25 to 50 per cent. less. The figures did not show it, and as a matter of fact he did not think it was the case. At any rate, it was not the case as compared with the cost in that particular hospital. He presented a statement showing the actual cost in 1890, and the actual cost this year, showing that they were more expensive then than they are now. One other mistake of Dr. Wise's, and he thought a very natural one perhaps, was in regard to the time when the city authorities increased the cost of maintenance. Dr. Wise had evidently misunderstood him, in saying that he said that they made a spurt after it was determined that the hospitals should be handed over to the state, and that for a few months this cost had shown a fictitious appearance, which it did not hold in other years. The exact reverse was the case, and was what he told Dr. Wise. After the city authorities found out that the transfer to state care was assured, they cut down in every possible direction. The spurt was made not after the thing was assured, but when there was some prospect of defeating it. So long as the city authorities thought that the bill was going to be defeated, owing to the veto of Mayor Strong, they did make an appearance for a year of a very decided increase, but that was prior to the assurance of state care and not after. There was one other statement he desired to make, in order that he might not be misunderstood, and that was that in speaking of the food supplies, what he had said had appeared to be confused with what has always been said about the actual cost of the recent experimental dietaries; in speaking of the food supplies and in the figures which he gave in regard to them he included food for all purposes, which covered special or extra diet as well as the ordinary materials prepared from the dietary table. This appeared to have grown out of a remark of Mrs. Kinnicutt giving the probable cost of the dietary as 16 cents and stating that at one time under the city it had amounted to 17 cents. There were several

Monthly Conferences

occasions under the city when it amounted in some of the departments to 17 or even 20 cents a day, but in each year in the reports the actual cost is given for each of the four departments. As a matter of fact, if Mrs. Kinnicutt's dietary table had been carried out, it would have cost $16\frac{96}{100}$ cents a day.

The chairman stated that the conference would understand that this question was brought up at the last meeting in the discussion of the dietary prepared by Mrs. Kinnicutt, and of Mrs. Kinnicutt having said, when he informed her that some of the superintendents had said that it would cost more than the previous dietaries, that as compared with what they had received under the city it was not expensive, as they then received 17 cents a day, and under her dietary she had been informed it would only cost 16 cents a day. That fact was correctly stated in the minutes of the last meeting. There was another matter that was correctly stated in same paragraph, and was based upon Dr. Macdonald's own reports, and those were the figures which state what the cost was in 1890. These figures were furnished by Commissioner Brown, who had looked them up, and he (the chairman) had since corroborated them, and they were substantially correct in round numbers. So far as his quoting Dr. Macdonald was concerned, that was a matter of impression, of course. There had been no minutes taken and no memoranda, but his impression was as he had stated, but he was willing, if mistaken, to correct that; but as he understood, and had always understood, and as Mr. Austin had found in the office of the commissioners of charities, the same articles had heretofore been placed under provisions and stores as were now; that they then had as now, laundry supplies, toilet articles, and quite a good many things besides food supplies proper.

Dr. Macdonald stated that that was absolutely incorrect; that nothing was included under that head except what went into the patients' dietary; that that was the difference between the city and state in their systems of accounts.

Dr. Wise said in respect to the cost of provisions during the year 1896-7 as compared with five years previous, that he had been informed by men who knew more about it than he did, and prob-

Monthly Conferences

ably more than any of the superintendents, that there was a difference in the cost of food supplies of from 25 to 50 per cent. He thought this would hold good in the matter of coffee, teas, and a great many other things. It should also be understood that the present estimate No. 3, headed "Provisions and Stores," contained much more than food supplies. It also contained crockery, and things of that kind.

Dr. Macdonald stated under the city food supplies were included and nothing else.

The chairman stated that admitting that it was true, on their own statement it made a very poor comparison. From Dr. Macdonald's own statement, the maximum daily per capita cost during a period of eleven years under the New York city asylums was \$0.165, while the minimum was \$0.134.

Commissioner Brown stated that he based his statement on their report for the year 1890, which is reprinted in the annual report of the Commission, that their total expenditures for the whole year for a population of 4,969 patients was \$607,944.56. This was the year ending September 30, 1890.

Dr. Macdonald said that was an entirely different matter, and had no bearing on the subject, as the city had not figured its expenditures on the basis of the state's fiscal year, but on the year ending December 31st.

Commissioner Brown stated that if the \$608,000, in round numbers, was divided by the number of patients, and from the result the cost of food supplies at 17 cents a day were deducted, there would not be enough money left to pay for wages.

Dr. Macdonald said that this year was not a fair comparison, as 17 cents a day did not represent the cost in that year, and that the commissioner had purposely picked out a year when the total amount was small and when the cost of food supplies was high and used it as an average for five years.

Commissioner Brown replied that he would take any year, and that he did not believe one year could be found where on an average 17 cents a day represented the cost of food supplies, and that he did not consider it possible.

Monthly Conferences

Dr. Pilgrim moved that Dr. Macdonald's remarks be printed in the minutes. Carried.

Commissioner Brown said that the managers of the Manhattan State Hospital had stated that the food supplies were higher under the city than they are to-day, and that he had not picked out any particular year at random, but that he had gone over several years and found substantially the same state of affairs for a long period. He maintained that if the food supplies had cost 17 cents a day, there would not have been money left to pay employees or for any other purposes.

Dr. Macdonald replied that they did have money enough, and that the reports showed exactly how the money was expended, how much for salaries and wages, how much for miscellaneous articles, how much for drugs, how much for fuel and light, etc. He did not know what the managers had said, but so far as they could have quoted him they could have said nothing of the kind Mr. Brown stated.

The chairman stated that under the city the salaries were approximately about one-half what they are now, and he thought probably everything else was lower accordingly. It should be recollected that under the present state system, one-third of the maintenance was expended for provisions. Referring to the system under the city, he said that taking any year it would be found that one-half of the amount expended was for provisions; that the expenditures on account of other items were very small, and that anyone who had visited the institutions on Ward's Island in the old days and would take occasion to visit them at the present time, would understand why they were small. The conditions are very much improved, and he did not think Dr. Macdonald himself could deny that. The one item of provisions had occasioned considerable disturbance at the Manhattan State Hospital, under the state system, and he did not think with good cause, because he believed that the patients in the other state hospitals, for instance at Utica, where the estimate for provisions and stores covering a period of five months showed a per capita of \$30 as against \$45 at Manhattan, taken from treasurers'

Monthly Conferences

reports, were not improperly provided for. He considered they were fully as well provided for as at the Manhattan State Hospital, without making any further comparisons. He maintained that there had been a tendency on the part of the officers of the Manhattan State Hospital to assume a carping attitude toward the present system of care, and without any attempt at commendation of any features, to criticise matters generally, which he considered causeless, baseless and unjust. He had made this statement before in the presence of Dr. Macdonald. It was very possible that under the old system allowances for food supplies might have been made which they did not now receive, but the question as to their necessity or advisability was entirely another matter, which he thought a proper subject for the consideration of the Commission.

Dr. Macdonald said that he had no disposition to criticise; that he had simply asked an opportunity to correct certain criticisms in regard to himself, which he had no doubt were made either through inadvertence or through misapprehension. The matter had come up here, and he himself had made no comparison as between the present conditions and the conditions under the city; that he had always deprecated them; but he thought there was opportunity for comparison in the matter of food supplies as between the present time and the time two years ago when they came under state care. It was a matter of opinion possibly, but he was very free to say, even if it be deemed carping, that he did not consider dietary tables which go away below 14 cents a day suitable or adequate; for instance, on Easter Sunday, when the poorest people in the world manage to get a scrap of meat to eat, their patients would be denied.

Dr. Pilgrim read from the April dietary, the dietary for April 10th, Easter Sunday, as follows: Breakfast—Boiled eggs (two each), farina, syrup, bread, butter, coffee. Dinner—Oyster stew, crackers, potatoes, bread butter, tapioca pudding, coffee for men, tea for women. Supper—Fruit or sauce, bread, butter, tea. He considered that a pretty good dietary, and so long as this question was under consideration, he thought it was no more than

Monthly Conferences

fair for him to say that there never had been so much satisfaction in the hospital at Poughkeepsie in the five years that he had been there as there had been since they had had this so-called basic dietary. He also stated that, if the dietary prepared by Mrs. Kinnicutt had been fully carried out, it would have cost the Poughkeepsie hospital \$1 per month per patient more than the preceding dietary, or about \$1,600 more, and on the same basis, would have cost the state system \$21,000 more.

The chairman stated that from his observation, and he did not believe he had been partial in his observations, as a matter of fact, there was not half or quarter, and he thought he could go farther than that, the number of complaints at the Utica State Hospital in regard to food supplies, where they estimated, as had been said for \$30 per capita as against \$45 at Manhattan, as there were at the Manhattan State Hospital.

Dr. Macdonald said that if the element of stores were introduced it would destroy the argument. The whole trouble came from comparing things which could not properly be compared. If it were narrowed down to the cost of food alone, then there would be a proper basis for comparison.

The chairman stated that they now had the cost of food supplies down to a cent and a fraction of a cent, and that Dr. Macdonald was mistaken in his statement. The Commission had a three months' comparison of the expenditures as per treasurers' reports of all the institutions.

Dr. Macdonald said that such a comparison was not worth the paper it was written on; that there was one item, that of farinaceous foods, of which in the winter they bought a three months' supply of flour for the Hart's Island department on account of the inability to reach there on account of the ice. He considered the only fair basis for comparison would be for an entire year.

The chairman said that the comparison of Manhattan with the hospital in the state in which there was the minimum cost was made to prove a point, and he thought he had done so. The same thing applied more or less in the other hospitals.

Monthly Conferences

Commissioner Brown read from a statement he had prepared showing the per capita cost of estimates for a period of seven months of the several hospitals for provisions and stores, including the month of April, as follows: Utica, \$30.87; Willard, \$32.74; Hudson River, \$44.87; Middletown, \$42.49; Buffalo, \$41.86; Binghamton, \$37.92; St. Lawrence, \$40.63; Rochester, \$40.32; Long Island, \$42.41; Manhattan, \$45.67. The increases and reductions as compared with the same period last year were approximately as follows:

	Increase.	Decrease.
Utica.	\$6 00
Willard.	Some.
Hudson River	\$4 00
Middletown.	1 00
Buffalo.	Slight.	
Binghamton.	Slight.	
St. Lawrence	3 00
Rochester.	4 00
Long Island	3 00
Manhattan.	3 00

He thought that the point that Dr. Wise made was very pertinent, namely, that there should not be any such discrepancy. Experience showed that in averaging the estimate of provisions and stores every month showed about the same results. It had been said that a comparison of the treasurers' reports for a period of three months would not show anything of value; he thought himself that there was something in that statement, as, as had been said by Dr. Macdonald, one institution might purchase a supply of flour to cover a number of months supply, as in the case of Hart's Island; but a period of six months ought to show pretty clearly how expenditures are running. Experience in the office of the Commission showed that estimates and treasurer's reports bore a relation to each other that was almost uniform. It was true that expenditures did not equal the estimates, but the percentage of expenditures less than the estimates averaged about the same all the way through, so that for comparative purposes it could not safely be asserted that this ratio would not obtain.

Monthly Conferences

Dr. Macdonald claimed that there could be no true comparison except on the basis of a year's experience, and he offered a resolution that the State Commission be requested, in preparing any comparative statement, to take into account one full year. He said that all knew that towards the end of the year the treasurers' reports did not show the average rate for each month of the year, because bills are held over so as to make up a treasurer's report to make up appearances.

The chairman stated that the expenditures as per treasurers' reports for the period of three months on farinaceous foods showed as follows: Utica, \$2.56; Willard, \$1.91; Hudson River, \$2.59; Middletown, \$2.06; Buffalo, \$2.20; Binghamton, \$2.11; St. Lawrence, \$2.78; Brooklyn, \$2.66; Kings Park, \$2.52; Manhattan, female department, \$2.31; male department, \$2.81; Central Islip, \$3.44; Hart's Island, \$2.52. Fresh meats: Utica, \$3.54; Willard, \$3.87; Hudson River, \$3.80; Middletown, \$4.23; Buffalo, \$2.89; Binghamton, \$3.53; St. Lawrence, \$3.15; Rochester, \$3.20; Brooklyn, \$3.42; Kings Park, \$2.51; Manhattan, female department, \$3.71; male department, \$4.21; Central Islip, \$3.12; Hart's Island, \$4.27. Dairy products: Utica, \$5.63; Willard, \$3.03; Hudson River, \$5.14; Middletown, \$6.45; Buffalo, \$4.35; Binghamton, \$5.76; St. Lawrence, \$4.89; Rochester, \$3.44; Brooklyn, \$5.42; Kings Park, \$3.74; Manhattan, female department, \$6.75; male department, \$6.36; Central Islip, \$6.03; Hart's Island, \$6.19. Dry groceries: Utica, \$1.34; Willard, \$1.36; Hudson River, \$1.64; Middletown, \$1.30; Buffalo, \$1.63; Binghamton, \$1.66; St. Lawrence, \$1.79; Rochester, \$1.01; Brooklyn, \$1.56; Kings Park, \$1.48; Manhattan, female department, \$1.83; male department, \$1.78; Central Islip, \$1.75; Hart's Island, \$1.62. The total for three months was as follows: Utica, \$16.32; Willard, \$12.57; Hudson River, \$18.81; Middletown, \$18.62; Buffalo, \$16.31; Binghamton, \$16.41; St. Lawrence, \$16.62; Rochester, \$16.31; Brooklyn, \$17.89; Kings Park, \$15.24; Manhattan, female department, \$21.19; male department, \$20.29; Central Islip, \$17.96; Hart's Island, \$20.75.

Dr. Pilgrim stated that he did not think this bore out the state-

Monthly Conferences

ment that the Utica State Hospital was 50 per cent. less on provisions and stores.

The motion of Dr. Macdonald that the Commission, in preparing any comparative statement, should take into account one full year, was seconded by Dr. Talcott and adopted.

The chairman notified the conference that the Commission would pay no attention to the resolution whatever; that the Commission could not be throttled; that they would make such comparisons as they saw fit and publish what they saw fit; that if they had let matters go on last year as they had started out there would have been a very large deficit. It was these very comparisons that stopped that extraordinary expenditure and saved them from having a large deficiency.

The chairman stated that there was a great difference between comparisons based on estimates and comparisons based on expenditures. One hospital might not buy up as close to the estimates as another. The comparison made by Mr. Brown was based on estimates for seven months.

Dr. Pilgrim stated that he thought as Dr. Macdonald did; that such a comparison was not worth the paper it was written on.

The chairman said that he did not think they were reliable himself.

Commissioner Brown stated that next month a statement would be submitted showing the expenditures for a period of six months, according to the new classification, which is precisely the same for all the institutions in the state, and this would show very accurately what the actual conditions were.

The chairman stated that the first report to be made was that of the committee of which Dr. Howard was chairman, to report upon grades and brands of flour. The committee consisted of Drs. Howard, Hurd and Blumer, and Commissioner Parkhurst, ex-officio.

Dr. Hurd said that after communicating with Dr. Howard, Dr. Blumer and Mr. Parkhurst, most of the work had been done by Dr. Howard and Commissioner Parkhurst. The committee had expected to have a meeting before the conference, but owing to

Monthly Conferences

the severe illness of Mrs. Howard, Dr. Howard was not present at the conference, and the committee could only report progress and ask to have their time extended.

There being no objection, the chairman stated that the committee would be continued.

The chairman said that the next matter was the report of the committee authorized to enter into contract for dress goods for all the women patients of the state hospitals for a period of six months from April 1, 1898.

Dr. Hurd reported as follows:

REPORT OF COMMITTEE ON DRESS GOODS.

The committee appointed by the superintendents at the January meeting to consider the subject of dress materials, made a report at the last meeting, of which the following is a recapitulation.

First grade.—Dresses to be of cashmere or its equivalent, not to exceed $16\frac{1}{2}$ cents a yard, for 33-inch goods.

Second grade.—Dresses to be of percales or its equivalent, not to exceed 10 cents a yard.

Third grade.—Dresses to be of seersucker or its equivalent, not to exceed 8 cents a yard.

Fourth grade.—Strong dresses to be of "special check" ginghams, 29 inches wide, not to exceed $12\frac{1}{2}$ cents a yard.

This report was accepted and adopted, and a motion carried that the same committee be empowered to purchase for the different hospitals for a six months' supply of materials of these different grades.

The committee, acting in accordance with these directions, wrote to the different superintendents, asking them to notify the committee how many yards of each of these grades the hospital wished to purchase for the ensuing six months, with the request that the amount should be placed in the April estimates.

It also requested the Commission in Lunacy to notify it to what extent these estimates would be allowed, in order that purchases might be made promptly, and the committee know how far it would be supported in the purchase of such goods.

Responses from the different hospitals indicate a wide variation not only in the quantities of the different grades, as was to be expected, but many variations from the schedule established by the committee; some wishing much more expensive goods for the first grade, and some requesting much cheaper goods in the

Monthly Conferences

lowest grade, and some making no requests whatever for goods of the first and second grades.

No response having been received from the Commission as to how far or to what extent estimates would be allowed, the committee has been unable to purchase, not knowing what quantities would be required or paid for, and it being also unknown whether the Commission would allow certain hospitals to use the more expensive goods, and other hospitals to use only the cheaper goods, it is evident that the uniformity aimed at will be impossible, and great doubt is expressed in consequence if purchases by this committee would give satisfaction.

Some of the hospitals have furthermore requested that they be allowed to select their own patterns of the lowest class, as they are used for various purposes of classification.

It appears from the investigations of the chairman of the committee that standard goods, such as were recommended by the committee, do not vary in prices, to any appreciable extent, in different parts of the state, and that the only advantage in price likely to be obtained is when goods are bought in case lots. If this is done, it will be necessary for the committee to have some place where these goods can be undone and repacked, that the varieties desired by the different hospitals may be obtained.

In view of the lack of uniformity of requests, of the lack of compliance with the different grades reported by the committee and which were unanimously adopted by the conference, and in view of the fact that the quantities which would be allowed could not be ascertained by the committee, it would report that no purchases have been made. Hence the committee would recommend:

First.—That if the classification at hand is not satisfactory, new classifications be adopted by the conference, to which all would agree and live up to, and that the committee then be empowered to purchase.

Second.—That a uniform series of grades be adopted, and each hospital then be empowered to select and buy as it chooses, under this schedule, and that this committee be discharged from further duty.

E. H. HOWARD,
Chairman.

A. W. HURD,
Secretary.

Dr. Hurd said that the committee had not made the contract, and that he supposed the delay was natural. The report of the committee was accepted and adopted and a motion carried at the

Monthly Conferences

last conference authorizing the committee to make the purchase for a six months' supply of three grades of dress goods. The committee requested the Commission in Lunacy to notify it as to what extent the estimates of the several hospitals for dress goods as contained in the April estimates would be allowed, in order that the committee might know the quantities to contract for, the grades, etc. The hospitals were also requested to send to the committee a statement of their needs. The responses from the various hospitals indicated some variation not only in quantities of the different grades, as was to be expected, but there were some variations from the schedule adopted by the committee, some wishing somewhat more expensive goods, for the first grade, and some cheaper goods for the lowest grade, and some making no request whatever for first and second grades, which, however, would not complicate matters at all. The committee had received no response from the Commission as to the extent estimates would be allowed. In view of the different views of the superintendents it was doubtful, too, whether a purchase made by the committee, under the circumstances, would be satisfactory, and the committee did not wish to go ahead and purchase until everyone was satisfied. Therefore, the committee would report that no contract had been entered into and would simply report progress and ask for instructions. The committee would recommend, first, that if the classification previously reported was not entirely satisfactory to all parties, a new classification be adopted by the conference, and that the committee be empowered to purchase, or second, that a uniform series of grades be adopted and a classification adopted and each hospital be empowered to select and buy as it chooses under this schedule, and the committee be discharged from further duty, that is, from the actual purchase.

Dr. Macdonald moved that the report be accepted and that the second suggestion be adopted. Seconded by Dr. Talcott.

Auditor Sanford stated that the Commission had received a communication from the committee asking for a statement of the revised estimates, but of course that could not be furnished until the estimates were revised.

Monthly Conferences

Dr. Hurd stated that the committee had thought that the revision might be accomplished before the conference.

Commissioner Brown inquired if the suggestion last made were adopted under the motion of Dr. Macdonald whether the matter would not be put right back where it was originally. Each hospital would practically exercise its own choice as to quality and as to prices, and each hospital would purchase individually, so that the objects of the law would be in all instances defeated, which was just what they had been trying to contend against. The objects they had in view were uniformity in the class of goods, uniformity in price, and to get the best possible discounts, which could not be accomplished unless standard grades were adopted and unless the hospitals united in the purchase.

Dr. Macdonald said that the matter of price was regulated by the Commission, and therefore there could not be such a difference in price as between two institutions as had been claimed. He maintained that these staple articles could not be bought any cheaper by joint purchase, although he did not know what determination the committee had reached in regard to this matter. For instance, taking the matter of seersuckers, which he thought were generally recommended, they had an absolute price, and nobody could cut under anybody else, and the same applied to other standard articles. The necessity for the purchase of winter goods had passed, and would not come up until August or September, when they were generally made up, and he would amend his motion so far as to provide that the report of the committee be accepted and that the goods which will be actually in work within the next six months be purchased by the several hospitals under the limitation of price established by the State Commission.

Commissioner Brown explained that the trouble about this scheme would be that in case the auditor were to revise the prices on the basis of the lowest estimate, in many instances there would be a great outcry on the part of the hospital authorities. On this account heretofore there had been a variation of 25, 30 or 40 per cent. sometimes in the estimated prices for precisely the

Monthly Conferences

same class of goods. If that course had been pursued during the last three years, there would have been an enormous saving in expenditure.

Dr. Macdonald said that, taking as an instance Bates' seer-suckers, they had asked for prices from three of the largest firms in the city of New York, and had been quoted identically the same price by each, the representatives stating that they were under hide-bound agreement with the mills that they should not cut one under the other. In staple articles he believed that Dr. Hurd could buy in Buffalo and he in New York to better advantage to the institution than if Dr. Hurd were to buy in Buffalo for him and he in New York for Dr. Hurd.

Dr. Hurd stated that Dr. Macdonald's motion involved two points which it was for the conference to decide, the first, whether the four grades which were reported at the last conference should be adopted or a new classification, or, secondly, whether the committee shall make the purchase or the hospitals. It seemed to him there were two propositions, whether this classification should stand, and if it did, whether the committee should purchase for the hospitals or not; secondly, whether if this classification did not stand a new classification should be adopted, and then the same question as to who should do the purchasing.

The chairman stated that this matter had been very thoroughly gone over. The committee had received the opinions of all the superintendents, had worked upon the matter carefully and conscientiously, and had determined upon the classification which had been adopted by the conference. It was notorious that the conference would set a committee at work, and let them do a large amount of work upon a matter, make a report, and the conference accept and adopt their report, and then at the next conference reverse its decision. The conference seemed to know its own mind when it adopted the classification made by the committee, and when they appointed this committee to make the purchase, and he would like to know the reason for the change of mind. The same conditions existed, and the same demands existed for clothing, the same kinds of clothing were called for.

Monthly Conferences

It might be true that certain brands of seersuckers and other standard supplies might not differ very much in price from one end of the State to the other, but that represented only a small portion of the cloth which is purchased; take it in the matter of gingham, and there was a difference. He said in addition that last year's patterns, which were just as good for practical purposes, could be bought for at least 10 per cent. less than this year's could be bought.

Dr. Macdonald's motion was adopted by the following vote:

Ayes: Drs. Potter, Wagner, Arthur, Talcott, Macdonald, Macy, Elliott and Evarts (one vote). Total, 8.

Noes: Drs. Pilgrim, Hurd, Blumer. Total, 3.

The chairman stated that if the superintendents declined to take any action in this matter the Commission would be obliged to. He thought if the superintendents had done it, it would have been better for them. The committee would therefore have to be discharged, and the next matter would be to get their estimates allowed by the Commission.

Dr. Blumer stated that he thought the conference had already declared itself on the principle of the joint purchase of supplies.

Dr. Hurd said that the conference had declared itself unanimously on this thing last month.

Dr. Wagner moved to reconsider the motion just adopted.

Seconded by Dr. Blumer.

Commissioner Brown stated that most of the estimates had been prepared on the basis of the report of this committee, as he understood it. By voting to do away with all that had been done they would go back to the old system of confusion that they had had before. They had now practically voted that they would not unite on these purchases; that they would not agree on any standard goods, and that the old unsatisfactory course which had prevailed for three years should be returned to, and he did not think that this was the sense of the individual members of the conference. He did not think they desired to do that and have it understood by people outside that they were opposed to that principle. *He hoped, therefore, that the motion to reconsider would prevail.*

Monthly Conferences

Dr. Macdonald stated that the classification had already been adopted, and that their hospital certainly had made their estimates in accordance with it; that this did not reopen that question at all. It was already in the hands of the Commission, under the classification that was adopted. This was merely adopting a suggestion of the committee itself as to the method of purchasing, whether by the hospitals individually or collectively.

Dr. Hurd said it would require a new motion then to readopt this classification. The second recommendation was that a uniform series of goods be adopted, and that each hospital then be empowered to buy as it chose under this schedule, and that this committee be discharged. It would now require under the motion just adopted that a new classification be adopted, and that the system of joint purchase be abolished as far as dress goods were concerned.

Dr. Macdonald maintained that his motion did not affect the matter of the classification.

The chairman stated that any one could see by examining the estimates for years past that in the estimates for dress goods, and in fact all kinds of dry goods, there had been a mass of confusion, which had almost been the death of the auditor. He had come to the commissioners for advice, and they had said they would leave the matter to the superintendents, as they were the best fitted to settle the matter. That was done over a year ago, and there was a committee appointed who considered the matter for three months, had communication with the different hospitals, and at last settled upon a classification of dress goods. It was passed unanimously by the conference, and the conference had just now done away with that classification. Then the question of joint purchase came up last month, and the conference authorized the appointment of a committee by the chair who should be empowered to purchase dress goods for all the women patients of all the state hospitals under the old classification. That committee was not under any obligation to come to this conference with a report at all. They had the power to purchase, and it was very unwise on their part to make these suggestions, because just such an opportunity had

Monthly Conferences

arisen, and he thought that most of the members of the conference had voted on this motion under a misapprehension. The principle of this matter had already been settled, not only by law, but by the gentlemen composing the conference, and they had now abrogated the whole thing. The Commission did not want to pass on these matters if the superintendents would, and the Commission simply asked them to carry out the provisions of the law, which require that joint purchase shall be made. Evidently they must be made, and if it is not done, the legislature would take other means of having it done. They were constantly threatening it, and they would do it, and they could not be prevented from doing it. One of them had said to him the other day when he heard of this system of joint purchasing that that was substantially a central purchasing agency, and he had said that it was substantially, and in this way they had an argument that would go a long way to defeat the establishment of a central purchasing agency. If the conference was determined to violate the law, the first thing they knew they would have the matter of purchase taken entirely out of their hands. He had given this note of warning several times before, and he wanted them to understand and feel that they had had warning. He thought the Commission was in a better position to feel the pulse of the legislature and the Governor than the superintendents, and he could state positively that that feeling did exist, and to no small degree.

Dr. Macdonald said that this matter of the grade of goods was not affected by the resolution which had been carried, and, of course, would not be affected by a reconsideration. He for one did not like the classification; he thought some of the goods were unnecessarily high and others were too low. He did not consider that that question had been affected or could be considered; he thought it was past consideration. The conference had a perfect right to adopt, and had adopted those grades of articles, and in the case of their hospital their estimates had been made in accordance with them. The other point as to the method of purchasing had been brought up by the committee itself, and it was *certainly* not discourteous or anything of the kind to the com-

Monthly Conferences

mittee in offering the motion that their second recommendation should be adopted. Now as the matter of joint purchase had come up, he begged to say that the law did not say that joint contracts should be made; it explicitly said that two or more hospitals may do so. The chairman had said that this resolution was adopted unanimously; he was not present, but Dr. Dent was and had told him that he did not vote. He did not think that this committee or anybody could bind his board of managers to purchase what they had no previous knowledge of, no previous knowledge of the bids, no previous knowledge of who was bidding, when on the contrary they did know that parties from whom they had purchased for two years had not been even asked to send in a bid. No one can have any possible objection to the committee or a commissioner or anybody making a purchase for the hospitals which will relieve the superintendents from what is now a very unpleasant responsibility, nor could anybody possibly object to the purchase being made in such a way as to secure for the hospitals the very lowest price that could be obtained. He did not think the committee should be authorized to purchase in advance, without an opportunity of seeing their samples, without knowing who is bidding, or without knowing the prices. He said that there were two ways under which purchases could be made, by a joint contract in which the managers entered, and this was not such a case, or by the instructions of the superintendent to the steward, and this was not the case either. Now if the committee, or any committee, advertised for proposals, giving the widest opportunity for bidding on the part of all manufacturers or jobbers or merchants, he certainly for one, without any formality of contract or anything else, would be delighted to instruct his steward to buy in accordance with the instructions of the committee. He could not bind his managers to make a contract of which they knew nothing in advance, and he could not bind himself to accept what they purchased for him without seeing samples or knowing the prices or whether more than one had been asked to bid.

Dr. Hurd stated that what prices had been obtained by the committee were simply from dealers to give them an idea on

Monthly Conferences

which to base their report as to these different grades, but when they knew what amounts they could contract for, then the firms that Dr. Macdonald referred to would have the same opportunities as any one else to make bids. If the motion was reconsidered, no further action would be necessary. The committee would go on under the resolution adopted last month, and make the contracts.

Commissioner Brown stated that, if the motion was reconsidered, each superintendent should notify the dealers with whom they had had dealings that they would have an opportunity to make a bid, so that after the bids have been accepted and the contracts made there would be no opportunity for any dealer to say that he had not been consulted and that no opportunity had been given him to bid.

The motion to reconsider was carried by the following vote:

Ayes.—Wagner, Pilgrim, Potter, Elliott, Hurd, Blumer, Mabon.

Noes.—Talcott, Macdonald, Macy.

Not voting.—Arthur. (Temporarily absent.)

Dr. Macdonald said that the point he had desired to make was that the Manhattan State Hospital did not join in the instruction to the committee to make the purchase. He offered a resolution that the committee be requested to select samples, advertise for bids, and award the contract to the lowest bidder.

The motion was seconded by Dr. Macy and adopted unanimously.

Dr. Macdonald explained that there was nothing to prevent the committee otherwise making a purchase from an individual dealer without getting prices from anybody else. He did not suppose, of course, that the committee had any other intention than to pursue the course he suggested.

Dr. Hurd stated that the committee would follow the same procedure as Dr. Mabon's committee, advertise in the *Commercial Bulletin* and submit samples to the different superintendents, so as to meet their wishes as far as possible.

Dr. Macdonald said that that was precisely what had not been done in the case of Dr. Mabon's committee.

Monthly Conferences

Dr. Mabon, chairman of the committee appointed to enter into contract for certain staple articles of supply for all the hospitals, said that he could make a statement, but was not prepared to make a provisional report. The committee had met at the Park Avenue Hotel on Saturday noon and received bids for one hour and samples, and immediately set to work to tabulate the bids and had been engaged at that ever since, working until 10 o'clock the night before, so that it was impossible to make any report to this conference. He was going back again as soon as he could be relieved and they would then select prices and samples. In the matter of soap, it seemed to him that it would not be to the advantage of the state to purchase a three months' supply. There was some question in the minds of some of the bidders as to the quality, and two or three firms stated that a bar of soap with only five per cent. of rosin could not be obtained. That specification was made at the request of Dr. Howard, and inasmuch as he was about to establish a soap plant, he supposed he was familiar with the situation. There was also a question as to the number of pounds to the box and the size of the cakes. So far as cereals were concerned, it seemed that there were certain features about it which might make it advisable not to award contracts for them, inasmuch as every dealer had practically tried to cover himself for any future loss. He thought, in some instances particularly, some of the cereals might be purchased of local dealers, who had offered to supply only certain hospitals. Their prices were reasonable and compared well with market prices to-day, but where endeavors had been made to supply all the state hospitals there had been too much of an attempt to protect themselves from any possible loss by reason of advance in price. He would, therefore, ask that this statement be accepted in lieu of a preliminary report, as the work of the committee was not far enough advanced to make a report. In considering these bids the committee had looked over the commercial journals for a considerable period of time in the past to see whether it was going to be economical in certain directions to make a joint purchase or not.

Monthly Conferences

The chairman stated that the United States government established a sample and received bids on that sample. He thought this would relieve the work of the committee.

Dr. Mabon said that the committee intended to make that recommendation, and had hoped to prepare a report for presentation at this conference, but that when they did make a report that would be one of the recommendations.

Dr. Pilgrim stated that Dr. Wagner, Dr. Howard and himself were appointed a committee at the last conference to meet Mr. Mills and make objection to some prison-made goods. They had had a consultation with him, and he had promised to make all the amends he could, and that better work would be done in the future, and that he would endeavor to adopt any suggestions that they would make, and offered to make a report as to how he could improve on the work that had already been furnished and what could be done in the future. He had not yet made that report, so they were unable to present a final report, and would simply report progress and ask to be continued.

The chairman stated that there being no objection, the committee would be continued.

The chairman stated that Sanitary Engineer Gerhard visited him recently, and said that he had prepared a small work on sanitary engineering, which might be a good addition to the hospital libraries, and he asked if he would mention this fact to the conference, and he took this opportunity of doing so.

Commissioner Brown suggested to the conference the advisability of cultivating to a greater extent the raising of strawberries and small fruits generally.

Dr. Macdonald made a statement to the effect that the allowance of three cents per week per capita for fresh, dried, canned and preserved fruits was not sufficient. This was also the general consensus of opinion of a majority of the superintendents present.

Commissioner Brown said that some of the hospitals now received three or four times as much as they had before the adoption of this arrangement.

Monthly Conferences

The matter was discussed at considerable length, and the following resolution was offered by Dr. Macdonald and unanimously adopted:

Resolved, That in the opinion of the conference, the allowance of three cents a week for each patient for fruits, fresh, canned, dried and preserved is not sufficient, and that the state Commission be requested either to increase the amount of the allowance or to restrict its purchasing power to fresh fruits, as originally intended.

It was shown from the minutes of the conference at which the three cents per capita allowance was adopted that it was intended to cover both fresh and dried fruits.

The chairman made a general statement to the effect that he was opposed to the principle of adopting per capita as the experience had almost always been that it was not conducive to economy of expenditure.

A representative of the Maltine Manufacturing Co. was allowed five minutes in which to address the conference.

The chairman brought to the attention of the conference the fact that the firm of O. Jaffe & Pinkus still had on hand a considerable supply of the towels called for under their old contract with the state hospitals. The surplus represented the share which had been allotted to the Manhattan State Hospital. This contract had been entered into shortly before that hospital came into the state hospital system and this allotment had been made in anticipation of its coming in. That institution had since refused to accept its proportion, and therefore a large quantity were still on the hands of the contractors, which of course the state was legally bound to take. The balance amounted to about 23,000 towels.

Dr. Macdonald claimed that as the Manhattan State Hospital was not a part of the state system at the time of the making of the contract, and therefore not a party to it, it was not bound to take these towels, which he did not consider suitable for state hospital use. He had based his opinion largely upon what the superintendents had said shortly after the hospital was transferred to the state system.

Monthly Conferences

In reply to an inquiry made by Commissioner Brown, the superintendents expressed themselves as generally satisfied with the quality of the towels, etc., the chief objection being to their size.

After a considerable discussion, Dr. Pilgrim moved that the balance on hand be divided up pro rata among all the hospitals. Carried.

Dr. Macdonald stated that on that basis, the Manhattan State Hospital would take its proportionate share.

Commissioner Brown recurred to the discussion had some time ago in regard to the matter of the cleaning of clothing by means of compressed air and by means of naphtha, and stated that this method was in successful operation at the present time, the Wagner and Pullman Palace Car Companies using it very extensively.

Dr. Pilgrim moved that a committee be appointed to look into the matter, and get definite information in regard thereto.

Dr. Macdonald stated that he had previously made a report upon this matter as a committee which would be found on file in the minutes of a previous conference.

It was suggested that Dr. Hurd might get some information in regard to the matter at Buffalo.

Dr. Pilgrim said that he and Dr. Wagner had observed at Morristown a blower in the laundry dry-house, which was claimed to produce very good results.

On motion of Dr. Talcott, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

STATE HOSPITALS—MAY ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held April 29, 1898.

Present.—Commissioners Wise, Brown and Parkhurst. Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. A. Macy, M. D., medical superintendent.

Monthly Conferences

ent; Hudson River State Hospital, Charles W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, H. J. Leonard, steward; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, A. E. Macdonald, M. D., general superintendent; Collins State Homeopathic Hospital, Daniel H. Arthur, M. D., medical superintendent.

Commissioner Wise, chairman.

Dr. Howard reported that the committee on dress-goods had completed their work and notified the hospitals that, in accordance with the directions of the conference, they had advertised for bids, selected samples and accepted proposals on the basis of the items for six months' supply of dress-goods as approved by the State Commission in Lunacy in the April estimates, after deducting contingency purchases already made. The whole order for the six months' supply should be made at one time.

The following is a copy of the letter of notification to state hospitals:

STATE OF NEW YORK—LONG ISLAND STATE HOSPITAL,

BROOKLYN, *April 28, 1898.*

To the State Hospitals:

The committee on dress-goods (supply for six months from April 1st, 1898) hereby respectfully informs you that in accordance with the directions of the Conference, they have advertised for bids, selected samples and accepted proposals as follows:

First grade—Cashmeres.—William Hengerer & Co., Buffalo, N. Y., at 12c. per yard.

Second grade—Percales—"B."—Sweetser, Pembroke & Co., 374 Broadway, New York, at 7.74c. per yard

Third grade—Seersuckers—(Bates).—Sweetser, Pembroke & Co., at 7.73c. per yard.

Ginghams—(Johnson's Bookfold).—J. H. Dunham, 340 Broadway, New York, at 5.45c. per yard.

Monthly Conferences

Ginghams (Lancaster).—Burke, Fitzsimons, Hone & Co., Rochester, N. Y., at 4.75c. per yard.

Toile du Norde.—John Wanamaker, Broadway and 10th St., New York, at 6.88c. per yard.

Cheviots—(A, B, C).—Sweetser, Pembroke & Co., at 7.32c. per yard.

Fourth grade—Special Check Ginghams.—Sweetser, Pembroke & Co., at 7.5c. per yard.

Samples of all these varieties will be sent by the committee to each hospital, from which patterns may be selected and orders forwarded to the respective firms.

These proposals have been accepted on the basis of the items for six months' supply of dress-goods as approved by the State Commission in Lunacy in the April estimates, after deducting the contingency purchases already made. The whole order for the six months' supply should be made at one time.

Very respectfully yours,

E. H. HOWARD,
A. W. HURD,

Committee.

On motion of Dr. Macdonald, the report was accepted.

Dr. Macdonald moved that the committee be requested to enter into contract in accordance with the report.

The chairman stated that he did not think this was necessary, as the committee had been authorized by the conference to make purchases and enter into contract, and that they reported only through courtesy, and the action of the conference in accepting their report was but an act of courtesy.

Dr. Hurd said that the action of the committee was substantially in accordance with the motion of Dr. Macdonald adopted at the last conference.

The chairman read from the abstract of the minutes of the last conference the motion made by Dr. Macdonald, which was adopted unanimously, and under which the committee had acted, as follows: "*Resolved*, That the committee be requested to select samples, advertise for bids, and award the contract to the lowest bidder."

Dr. Macdonald said that he did not think his motion at this time would do any harm.

The chairman replied that it would establish a bad precedent, after the conference had authorized them to act, and the committee had acted under such authorization.

Monthly Conferences

The chairman stated that the committee of which Dr. Howard was chairman was to report at the last conference as to grades and brands of flour, but on account of the absence of Dr. Howard, the committee was continued.

Dr. Howard stated that the committee had made proper inquiries, and had satisfied themselves that the specifications already on record as to the grades of flour for state hospital use were the best, and represented the most economical flour that could be purchased, and they would therefore recommend no change in this matter, and had found no reason to make any recommendation for a change in the methods that had previously been adopted, except in the matter of the purchase; Commissioner Parkhurst had made the suggestion and he as chairman of the committee would report in favor of a notice being sent to millers' associations in this state from the office of the Commission each month stating that there would be an opportunity to bid on so many barrels of a certain standing grade of flour.

Commissioner Parkhurst stated that he thought it would be best to have such a notice sent out, but that the question had been raised whether this notice should be sent from the office of the Commission or from each of the hospitals. The millers in the State complained that they did not have an opportunity to bid on flour, and said that they manufactured precisely the same grades of flour and could furnish it as cheap as it could be purchased anywhere.

The chairman inquired whether this report was concurred in by all the members of the committee.

Dr. Howard replied that he did not know as it was. He thought that Commissioner Parkhurst and himself were in accord in this report; that Dr. Blumer had said that he would agree to any report that the chairman would make; but that he believed Dr. Hurd was trying No. 2 wheat and was not prepared to accept the report.

Dr. Hurd stated that he was ready to accept the report as applied to No. 1; that as far as his experience had gone he believed that was correct, but as to the propriety of sending out the

Monthly Conferences

notice from the office of the Commission he was not prepared to concur.

The chairman said that he did not think such a course would be wise; that he believed the chairman of the committee ought to do that; that it was a part of his work.

Commissioner Brown stated that he thought he understood the purport of this report, and so far as his information went and so far as he had been able to ascertain it seemed to be conceded that the best results were obtained from the highest grade flour. On the other hand, it appeared that, for instance, some first-class hotels did not use this first grade, and he assumed, of course, that there must be financial advantages in such a course or they would not follow it. He had also been informed by one of the largest millers in the state, who manufactures all kinds of flour, that the difficulty was that the hospitals did not receive the grade of flour they paid for; that while the specifications called for a No. 1 spring patent, it was almost impossible to tell the difference between No. 1 and No. 2, and that, as a matter of fact, in most instances, they got No. 2. How this miller knew that was so he did not know, but it seemed to him that there ought to be some method of determining the question. He suggested that some sort of a certificate be required from the manufacturer or manufacturer's agent.

Commissioner Parkhurst inquired what assurance there would be, if No. 2 was asked for, that No. 3 was not furnished.

Commissioner Brown replied that a certificate would be required in either case. If the hospitals were getting No. 2 or No. 3 flour and were paying for No. 1, there should be some method devised to put a stop to that sort of practice. He said that one large miller had told him that he was satisfied this state of affairs was true, and that he would guarantee to send No. 2 flour to the hospitals under the guise of No. 1, and that he would guarantee that it would pass without notice. Henry Russell, of Albany, one of the largest dealers in flour in the country, and perhaps in the world, deals in 40 or 50 different grades.

Monthly Conferences

Dr. Wagner asked if he supposed that Washburn, Crosby & Co. would send out other grades of flour under the name of Gold Medal.

Commissioner Brown said that he did not believe they would; but that the conference had never felt willing to adopt specific brands of flour. Take Pillsbury's Best, Washburn & Crosby's Gold Medal, and others of that class, he said that no doubt the purchaser received what he paid for, but to go outside of these established brands, he did not believe that anybody could tell anything about it.

Dr. Mabon said that they had been using Gold Medal flour or flour that was supposed to be equal to it for years, and he did not believe that it was the experience of the hospitals that they had been cheated as to No. 1 flour. He regarded it as a gratuitous insult on the part of certain millers whose flour had not been purchased.

Dr. Howard said that it seemed to him that a certificate would be a very good thing, because Washburn, Crosby & Co.'s agent in Rochester represented that he sold Gold Medal flour to them at a lower price than it could be bought for to-day, without putting the Gold Medal brand upon it; that the Washburn-Crosby people authorized him to sell Gold Medal flour below the Gold Medal price if people would take it without the brand.

Commissioner Brown stated that he would corroborate what Dr. Howard had said by saying that Henry Russell told him that he would guarantee to sell Pillsbury's Best without the brand at a considerably lower price per barrel than the branded.

Dr. Macdonald stated that they had no trouble in New York, as they purchased flour which had the certificate of the Produce Exchange. He thought that should obtain in all other places, and was of the belief that the other hospitals could avail themselves of this privilege if they desired. The Produce Exchange had a standing committee that examines and grades all flours.

Commissioner Parkhurst said that he believed that there were manufacturers in this state who were just as reliable as any manufacturers outside the state, who bought precisely the same

Monthly Conferences

grade of wheat, had as good facilities for manufacturing, and could make just as good flour as could be made anywhere in the world.

Commissioner Brown, for the purpose of bringing the matter to a head, suggested that in future purchases of flour a certificate be required with each purchase that the flour furnished is in all respects according to the specifications adopted by the conference, such certificate to be made by the manufacturer, manufacturer's agent, or the Produce Exchange.

Dr. Macdonald said that that would not cover the case, as every manufacturer would certify that his flour was the best in the world, and he did not think the agent's certificate would be of much account. There should be a certificate by some independent body.

The chairman, to expedite matters, suggested that the committee on flour be continued and instructed to report at the next conference an arrangement with the Produce Exchange of New York for an examination of all the flours bought by the state hospitals, with the exception of the Willard State Hospital, and to adopt a form of certificate.

Commissioner Brown thought this would be a satisfactory solution of the difficulty.

Dr. Macdonald moved that the suggestion of the chairman be adopted. Seconded by Dr. Mabon and adopted unanimously.

Dr. Mabon submitted the report of the committee authorized by the conference to enter into contracts for certain staple articles of supply for all the state hospitals.

Dr. Macdonald moved that the committee be authorized and requested to enter into contract. He said that objection had been made in the other case that the committee had already been empowered to make a contract. This case was somewhat different, as the committee had not made contracts for some articles that they had been authorized to. He would like to explain that the chairman of the committee on dress goods had said that one of the bidders had objected to the award, and he thought that

Monthly Conferences

the committee would like to have the unanimous support of the conference in approving their course.

The chairman stated that the committee had not asked for it in their report, and he thought such action on the part of the conference would constitute a bad precedent. It might happen some time that the conference might try to repudiate an authorization of this kind in this manner.

Dr. Mabon said that he understood two months ago that the committee was authorized to make the purchases and to enter into contracts, and it seemed to him that this was sufficient authority. He said that the committee had acted under such authorization and that the contracts were now being executed. He saw no objection to again authorizing them to enter into these contracts, as this was the first report to the conference on the definite action that was taken.

Dr. Macdonald's motion was seconded by Dr. Macy and adopted.

The chairman stated that Dr. Pilgrim was chairman of a committee to meet the prison agent and to make objections to prison made goods.

Dr. Pilgrim said that the committee had met the agent of the prisons, and he had promised to make good any defects, and to listen to criticisms. He did not know as they could do anything further in the matter now.

Auditor Sanford stated that he had had a conversation with the new superintendent of prisons, Mr. Collins, in regard to the goods that the prisons were manufacturing. Mr. Collins had had experience in the dry goods business, and had told him that the prices that were being charged the hospitals for many articles, like knit goods and goods of that class, were too high. In regard to ticking, he said that the goods were not up to the standard, and that the prisons were issuing as first quality when they were in reality seconds. He said he wished the co-operation of the charitable institutions to remedy these defects, and that he was going to issue an order to the wardens of the several prisons to send to his office all complaints that were received

Monthly Conferences

from the officers of the charitable institutions, so that he could take personal cognizance thereof. He said that his view of running the prisons was not to make money for the prisons at the expense of the other institutions, and so long as the prisons could make a good and fair price and not go below the market price, and turn out fairly good goods, he would be satisfied.

The Chairman said that Dr. Hurd was requested at the last conference to get some information in regard to the cleaning of clothing by means of compressed air and naphtha.

Dr. Hurd said that he had visited one department of the works, but had not had time to go out to Depew, and asked for another month in which to report.

The chairman said that he would be given further time.

Dr. Mabon moved that a new committee be appointed on electric lamps, and authorized to make a test of all samples submitted, and that the committee report in time so that the contract might be entered into by July 1, 1898, when the present contract expires, and he would move in addition to that resolution that the contract be made for two years instead of one. He stated that the manufacture of electric lamps was now on an established basis, and that the prices had not varied for the past three years, and it takes from six weeks to two months to make proper tests.

Dr. Pilgrim moved to amend by providing that the old committee be re-appointed and continued.

Dr. Mabon requested that he be relieved from acting on this committee, and that some other member be appointed.

The amendment was put and declared lost.

The original motion of Dr. Mabon was then adopted.

The chairman appointed Drs. Pilgrim and Dewing as such committee.

Dr. Mabon stated that a committee should be appointed on training school examinations. These examinations were usually held in May.

Dr. Macdonald moved that the old committee be continued.
Seconded.

Monthly Conferences

Dr. Mabon moved as amendment that a new committee be appointed. Seconded.

The amendment was put by the chairman and declared lost.

The original motion of Dr. Macdonald was then adopted.

The chairman stated that after the last conference the Commission sent out a circular letter to the hospitals asking for reports relative to their probable needs for the coming year. Only three replies had thus far been received. Notwithstanding the important needs that might exist in these three hospitals, they could not be considered by the Commission until it had received replies from all the hospitals. He stated that the Commission would hold a meeting on May 9th or 10th to consider these matters, and hospitals that did not have their reports in at that time would not be considered. He assumed that all the hospitals had received due notice.

The chairman stated that the discussion in regard to flour had brought another matter to his attention, namely, beef. He thought that the statement that a different grade was often furnished than that paid for applied more to beef than to anything else, and just at the present time they were having more or less trouble, and that all kinds of statements had been received from various hospitals to the effect that the beef received was not such as it should be. There was no doubt in his mind but that the state was being worsted continually in this matter by the contractors, and some method should be adopted to obviate it.

After a protracted discussion of the beef question, Dr. Blumer moved that the Commission be requested to formulate a form of certificate to accompany each shipment of beef.

The motion was seconded by Dr. Pilgrim, and adopted unanimously.

Commissioner Brown said that the Commission had sent out a circular letter to the hospitals in regard to the matter of corned beef, and had received replies from all the hospitals. He called attention again to the fact that the hospital stewards should be

Monthly Conferences

careful to ascertain when purchasing corned beef that the corned beef they procured was not that from which the beef juice had been extracted for beef extract. He stated that it was customary for the large packers to put such an article upon the market without their brand or with a fictitious brand.

Commissioner Brown exhibited to the conference a packet of matches manufactured by the Diamond Match Co., in the form of a book, containing 20 safety matches for pocket use. He suggested that this was a very convenient form and that it might be well to have hospital employees supplied with them, as the present method of issuing safety matches by the box was inconvenient and not entirely satisfactory, inasmuch as employees often tore off the rough striking surface from the boxes and carried a supply of the loose matches in their pockets. These matches cost about \$1.05 a gross.

Dr. Mabon stated that the only kind of matches in his experience which would not ignite upon glass or other smooth surfaces was the "Red Top" manufactured by the Manhattan Match Co.

After considerable discussion, on motion of Dr. Blumer, Dr. Wagner was appointed a committee to inquire into the match question.

Commissioner Brown stated that some complaint had been made that the bread baked in the Queen bread tins dried up very rapidly, and that he had recently ascertained that experiment had shown that by mixing a small percentage of corn flour, not enough to affect the flavor, with the flour, the bread baked in these tins would keep moist. When at Hudson River State Hospital recently he had called the attention of the steward to this matter, and Dr. Pilgrim had just handed him the following memoranda in regard to the experiment conducted at that hospital.

Bolted white corn flour.—A small quantity of corn flour mixed with the wheat will keep the bread moist. This experiment has been tried with satisfactory results. Corn flour is worth about \$2.98 per barrel of 200 lbs. I would respectfully suggest that in making the estimate for flour, that we estimate for two-thirds

Monthly Conferences

wheat flour and the balance divided between rye, graham and corn flour. This will lessen the total cost of the flour.

Commissioner Brown said that while Dr. MacDonald was president of the Commission there had been an extended discussion in the conference of the matter of the bathing of patients twice each week. Dr. Macdonald had very strongly advocated this plan, and called attention particularly to the fact that where large numbers of patients were congregated, as for instance in the amusement halls, the odor from the persons of the patients was very preceptable, and he took the ground that the practice of bathing the patients generally twice each week would not work any hardship, and that the attendants might as well be engaged in bathing the patients at various times instead of standing around the wards idly with them. This seemed a very reasonable suggestion to him, and he inquired of the members of the conference to what extent this method of bathing had been carried out.

Dr. Wagner stated that the practice in regard to cleanly patients was to bathe them once a week. Some of the patients were necessarily bathed a number of times each day.

Dr. Pilgrim said that that was also the practice at Hudson River.

Dr. Mabon said that the rule at St. Lawrence was to bathe twice a week. It was the rule he had adopted while at the Willard State Hospital, and it had worked satisfactorily there.

Dr. Macdonald said that at Manhattan the patients were bathed once a week in winter and twice a week in summer. He did not think there would be any disadvantage in bathing them twice a week the year round.

Dr. Macy said that under ordinary conditions at Willard the patients were bathed once a week; that the practice inaugurated under Dr. Mabon's administration had been discontinued; that with their present facilities he did not think it would be a good thing to bathe them oftener, although he would favor it if they could be bathed more rapidly.

Mr. Leonard stated that the practice at Middletown was to bathe them once each week.

Monthly Conferences

Dr. Howard said that at Rochester the patients were supposed to be bathed twice a week, but that he would not be heartbroken if he discovered that the plan was not universally carried out in the institution. In reply to an inquiry of Commissioner Brown, he said that each ward was provided with a spray bath.

Dr. Hurd said that the practice at Buffalo was to bathe the patients once a week on the cleanly wards, and twice a week on the uncleanly. He thought that it would be a good idea to bathe them twice a week generally.

Dr. Blumer remarked that ablution was not a cult at Utica. The patients there were bathed once a week, and in his judgment this was ample, and he had never seen any reason in the state hospital service why they should proceed otherwise in the matter of bathing than obtained in the class of the community outside which the patients represented, if by so doing they could maintain a measurable degree of hygienic cleanliness. The bathing of the patients in his judgment interfered very seriously with the general management of the institution and the work of the patients, and to bathe the patients at Utica twice a week would be a great nuisance and unnecessary. There were a great many cleanly men who bathed as often as they desired after they came in from their work.

Commissioner Brown said that he would like to have a vote on this question to see who were in favor of bathing twice a week.

Dr. Mabon moved that it was the sense of the conference that the patients should be bathed at least twice a week. (Not seconded.)

The superintendents generally expressed themselves as of the opinion that this was a matter which should be left to the discretion of the individual superintendents.

Dr. Mabon withdrew his motion.

Commissioner Brown stated that, so far as he had been able to observe, the temperature of the hot water in the hospital was very much above the scalding point. At one of the hospitals *recently* he had been informed by the engineer that it was neces-

Monthly Conferences

sary to keep the hot water at that high temperature on account of the dish washing department. It did not seem to him that it required a temperature above 110 degrees for that purpose. He had found in many instances that it was 145 or 150 degrees, and in one case 170. To keep the water at this exceedingly high temperature occasioned an enormous waste of coal, and was exceedingly dangerous. He called attention to the fact that a few years ago two patients were scalded to death by being put into a bath tub of scalding hot water. This was a matter which he believed should receive very careful attention, both with a view to economy and the safety of the inmates.

Commissioner Brown said that he had observed that the coffee used in some of the hospitals in the new method of filtration was not ground fine enough. Care should be exercised to see that this fault was remedied.

Commissioner Brown said that he considered that there should be some regulation as to the use of white and black pepper. The cost of the white pepper was considerably more than the black.

Commissioner Brown stated that considerable bitter complaint had been made as to the lack of facilities for bathing by men employed about the boiler-house and shops. A spray bath could be erected in the boiler-house or some other suitable locality which would afford proper facilities for this purpose, and he considered that it was a matter which should receive careful consideration. The cost of such spray bath would be about \$25.

Dr. Wagner offered the following resolution, which was unanimously adopted:

Whereas, The Government of the United States has called for volunteers to carry on the war with Spain, and in response thereto a number of employees in the state hospital service at the imminent risk of life and limb have volunteered and left good positions to serve their country in time of public peril.

Resolved, That it is the sense of this conference that all employees in the state hospital service, who volunteer and are enrolled in the army or navy of the United States during the Hispano-American war, be granted leave of absence during the time they serve, and that they be restored to their positions in the hospital service on their honorable discharge from the army or navy.

Monthly Conferences

Commissioner Brown said that his attention had been called to chapter 535 of the laws of 1895, in regard to the fire laws, and he would suggest that, as a matter of precaution that the superintendents carefully look into the matter, and see to what extent the law had been complied with.

The chairman said that that matter was considered immediately after it became a law by the conference, and it was regarded by everybody generally as containing some very foolish conditions, and if complied with literally, it would cost the state to-day \$50,000.

Commissioner Brown said that the only contention as he understood it was in regard to the number of fire extinguishers to a floor. The statute was open to some misconstruction in that particular, but there were other provisions in the law which should receive consideration.

The chairman said that he would like to ask Dr. Blumer, as chairman of the Editorial Committee of the *Bulletin*, to make some statement with respect to the present status of the *Bulletin*, so that it might become a matter of record in the proceedings of the conference.

Dr. Blumer stated that he was sorry that he had not been advised of this desire on the part of the conference to be informed particularly with reference to the *Bulletin*, because he had no data with him, and he could only discuss the subject in very general terms. He would frankly state that, while, by the grace of the conference, he was re-appointed managing editor of the *State Hospitals Bulletin*, it was without seeking on his part, and he would have much preferred to have someone else act in that capacity. He had not been *de facto* managing editor of that publication. The fact was that the *Bulletin* was largely managed by the State Pathological Institute, at New York, which was therefore largely responsible for the long delay that had occurred in bringing out the July, October and January issues. Those who were familiar with the Fabian tactics that prevail in certain departments of the State Pathological Institute he knew *would offer him their sympathy in his trials and tribulations*

Monthly Conferences

which he had schooled himself to look at with one eye only while regarding his mercies with both. He would report, however, that the July-October issue, being a double number, had gone to press and would be out in a very few days, and the January issue would follow in quick succession. The Pathological Institute informed him that it had material for the January issue, and that the surprises in connection with the publication would be of a crescendo character. He was quite confident that the July-October number when it reached their hands would well please them on account of the high character of the articles contained therein, and that the January issue, which would signalize the change of title as agreed upon by the conference would also be very gratifying. The matters pertaining to the *Bulletin* had been almost entirely left in the hands of the director of the Pathological Institute, who was responsible for the non-appearance of the *Bulletin*, if the speaker, as chairman of the editorial committee, could shift such responsibility.

The matter was discussed at considerable length by the conference, and there was an outspoken expression of opinion that the clinical work of the hospitals should not be crowded out of the journal entirely by the Pathological Institute.

Dr. Macdonald offered a resolution that it was the sense of the conference that the committee having charge of the publication of the *Bulletin* should proceed to press on a given date with the material in their hands and without waiting for any promised material which was not furnished at that date.

The motion was seconded by Dr Mabon, and unanimously adopted.

Dr. Mabon moved that the editorial committee be instructed to assign to the clinical features of the state hospitals a portion of space in the Archives (the new title), leaving it to their judgment.

Seconded by Dr. Hurd, and unanimously adopted.

Mr. Childs, of Utica, was granted permission to exhibit to the members of the conference his patent fire extinguisher, and Mr.

Monthly Conferences

F. D. Palmer submitted for the inspection of the superintendents a patent hose coupling.

On motion, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

STATE HOSPITALS—JUNE ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held May 31st, 1898.

Present.—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. A. Macy, M. D., medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, R. H. Hutchings, first assistant physician; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, F. A. Wheeler, steward; Manhattan State Hospital, E. C. Dent, medical superintendent female department; Collins State Homeopathic Hospital, D. H. Arthur, M. D., medical superintendent.

Commissioner Wise, chairman.

Dr. Hurd submitted and read the following report of the committee appointed to investigate the system of cleaning clothing, etc., as practiced by the Wagner Palace Car Co. at their works at Buffalo and Depew.

STATE OF NEW YORK—BUFFALO STATE HOSPITAL.

The committee appointed to investigate the system of cleaning clothing, hangings, etc., practiced by the Wagner Palace Car Company at their works at Buffalo and Depew, would respectfully report that two processes are in use:

First.—By subjecting hangings, blankets, cushions, etc., to a

Monthly Conferences

blast of air under pressure of from 50 to 75 pounds, which effectually drives dust, dirt, etc., from the fabric.

Secondly.—Washing in naphtha, clothing, bedding, etc., which is actually soiled and greasy. Both means are very effective.

The method of blowing dust from clothing by compressed air is, in the opinion of the committee, likely to be less useful in state hospitals than for the purpose for which it is used by the Wagner Palace Car Company as their hangings and upholstered beds are more subjected to dust in traveling trains than the clothing of patients or the fixtures in hospitals.

For cleaning by compressed air the following apparatus is needed: One duplex air compressor with a diameter of the steam cylinder of four inches, and length of stroke five inches, and the capacity of 18 cubic feet of free air per minute, suitable for carrying 25 to 125 pounds air pressure, according to the steam pressure carried, to cost in the neighborhood of \$250. In connection with this there is necessary an air receiver. For the purpose of a state hospital an air receiver 30 inches in diameter and six feet high, with one-fourth of an inch thickness of shell would answer, and would cost in the neighborhood of \$50. To this is attached hose and nozzle. Air pressure is carried from fifty to seventy pounds. The Wagner Company are using about fifty pounds pressure at present, which is less than they did formerly.

Fabrics are spread upon racks about eighteen inches from the ground and the hose nozzle is run over the fabrics about one-half an inch or an inch from the goods, thoroughly blowing the dust through it.

The second process consists in washing clothing, curtains, etc., with naphtha. The apparatus consists of an ordinary washing machine with an extractor and steam drying racks, inclosed in a building by themselves, apart from others. One hundred feet from this is located a naphtha storage tank, the capacity of which is about sixty gallons. The naphtha is pumped from this tank by a small steam pump. The specific gravity of the naphtha is about 66.

Sufficient naphtha is put into the machine to cover the goods and the machine is then allowed to operate for five minutes. The clothes are then returned to the extractor for five minutes more and then put in the steam drying room. In removing the clothing from the washing machine all that is attempted is to simply press upon the lid to remove excess of naphtha. The goods are never wrung out or any thing done to cause friction. To remove grease spots the clothing is laid upon a plate covered with copper, and brushed gently with a soft hair brush. Rubbing the goods in folds is not allowed on account of the great danger of fire.

Monthly Conferences

The naphtha is used over and over again and it is cleansed by putting in a pint of sulphuric acid to a barrel of naphtha in the tank, and stirred every second night. This precipitates the impurities. When the amount of dirt and sediment is too great the manipulator says he cleans out the tank and puts in fresh.

The mere washing in naphtha is not sufficient to remove grease spots, but brushing is first required. This process has never resulted in an accident or fire, but care is constantly maintained. The operator says it is a system more highly recommended for the cleaning of silk finishings and hangings and for the removal of dust, smoke, etc., than in the removal of actual grease spots.

Dr. Hurd stated that he had not been able to obtain the discounts on the machines. The price of the machines was not very high, and the method appeared to be very effective when used with care.

Commissioner Brown said that recently while in New York he had had a conversation with Mr. Walter C. Kerr, of the firm of Westinghouse, Church, Kerr & Co., who told him that air compressors were now in common use, and especially around dynamo-rooms for blowing the dust out of the machinery. He thought the cost of machines would be between \$200 and \$300.

Dr. Hurd stated that he had been informed that institutions like Poughkeepsie and Buffalo which have the Shone ejector would not need a special apparatus for the compressed air.

Commissioner Brown said he doubted very much whether that ejector was not already using all the pressure that it could develop; it was two miles away, and he doubted whether it would be a satisfactory thing, because the air compressor is run up to the maximum in doing this work.

Dr. Pilgrim stated that they had already established a plant at Hudson River, and that everything but the rack was in operation; they could get up an enormous pressure, and the air was sent with great force. The compressor cost \$150; the dynamo \$50, and incidentals \$25 or \$30. The work was done by the Westinghouse Company.

The chairman said that he thought it would be advisable to wait a sufficient length of time until Hudson River had had an opportunity of testing its practical operation before installing *plants at the other hospitals.*

Monthly Conferences

On motion of Dr. Blumer, the report of the committee was accepted.

Dr. Howard stated that the committee on training schools was at work, but were not now prepared to report.

Dr. Talcott, from the same committee, said that the examinations had all been held; that Dr. Howard had examined the Manhattan papers, and had passed them, and consequently the diplomas were to be issued for that hospital, and the rest would be issued, he supposed, during the coming month.

Dr. Hurd submitted the following report of the committee delegated to investigate the advisability of obtaining certificates of inspection from the Produce Exchange in the matter of flour.

STATE OF NEW YORK—BUFFALO STATE HOSPITAL.

The Flour Committee, delegated to investigate the advisability of obtaining certificates of inspection, would report that, on the recommendation of the steward of the Manhattan State Hospital, it visited a member of the Produce Exchange, who is connected with the Hecker-Jones-Jewell Milling Company, and the advice of this gentleman was against the necessity of obtaining certificates.

It was stated that the certificate of inspection is not sufficiently accurate to distinguish between the first and second grades of flour; that marked differences could be detected, especially unsoundness, but as between the first and second grades, he was not prepared to issue certificates. Furthermore the flour would have to be inspected at the nearest large shipping point, such as Buffalo or New York, as the inspectors are situated only in large centres, and it was stated that there would be more protection to the hospitals in buying a well-known brand from a reliable dealer than by buying an unknown flour and depending on certificates.

E. H. HOWARD,
A. W. HURD,
G. ALDER BLUMER.

On motion of Dr. Talcott, the report was accepted.

Commissioner Brown suggested that it might be well to require a certificate from the parties furnishing the flour in each case, to the effect that it was what the specifications called for.

The chairman stated that was a matter within the province of the Commission to regulate.

Monthly Conferences

The chairman read a circular letter issued by the Commission, under date of February 19, 1895, as follows:

“In the matter of injury to patients, such as suicides, homicides, serious assaults and other severe accidents.”

To the State Hospitals:

I am directed by the State Commission in Lunacy to say that in all cases of suicides, homicides or serious injury or accident of any kind to a patient, a detailed statement of all the material facts and circumstances connected therewith should be transmitted in writing to this office at the earliest practicable date.

Very respectfully yours,

T. E. McGARR,

Secretary.

In reply to an inquiry by the chairman, the representatives present stated that it was their belief that this procedure was invariably practiced.

The chairman said that a year had now elapsed since the Commission issued its circular letter in regard to the matter of food service. The chief points covered by this letter were that the food should be served as far as practicable after the patients had been seated at the tables; that it should be served in small quantities, and that a second serving should be made if the first quantity was not sufficient. He inquired of the individual members of the conference what results had been obtained in their several institutions.

Dr. Talcott stated that the result had been satisfactory. He thought the suggestions contained in the letter had been carried out as far as practicable. The notable exception was that the soup was served before the patients were seated. It was their custom to heat the soup plates in a heater attached to each dining-room, and then to put the soup on just before the patients were ushered in. In this way they received it hot, and did not run the risk of having it slopped over them in the serving. The nurses and others had had instructions to carry out these suggestions at that time, and repeatedly since that time, and that a short time ago they were again re-instructed.

Monthly Conferences

Dr. Pilgrim said that the recommendations of the Commission had been quite fully carried out, and that there was a very thorough inspection of the dining-room service. The food was served in small quantities, a second service was made when necessary, and before the patients were seated, except in the matter of soup or things of that kind, as referred to by Dr. Talcott. He had also found that the greatest benefit was derived from training patients to act as waiters and waitresses. He thought that there had been a very marked improvement in every dining-room connected with the institution during the past year.

Dr. Hutchings stated that he was not prepared to speak for the superintendent in this matter, but that so far as he knew, the recommendations had been carried out. He knew that the matter was brought up and discussed on his own service in the hospital, and that he had attempted to carry it out, and he was of the opinion that it had been done generally throughout the institution.

Mr. Wheeler said that it had been put into operation generally in both departments; that patients had been trained to serve the food, and the uniforming of them had seemed to produce a very good effect upon them.

Dr. Dent stated that it had been carried out in the female department; that they had trained patients to act as waitresses dressed in uniform, white aprons and white sleeves.

In reply to an inquiry of the chairman, Dr. Dent said that he spoke only for the female department.

The chairman stated that the Manhattan Hospital, as a whole, has only been represented three or four times in a year, and he thought it was a mistake that an institution having one-third of the insane of the state, should not be fully represented. If the hospital was represented by one of the medical superintendents, he should come empowered to speak and answer for the entire institution.

Dr. Pilgrim supplemented his remarks by stating that they had made a very fair trial of the use of paper napkins at his

Monthly Conferences

institution, and that the results were not nearly so unsatisfactory as reported by Dr. Howard; they dressed up the tables a good deal, and they were used in decorating food trays, and they were quite useful with the better class of patients; although with the untidy and destructive patients they were absolutely useless.

Dr. Macy reported that he had carried out the recommendations in regard to dining-room service, with one exception, that it was not always possible to serve the food after the patients were seated at the table.

Dr. Howard reported that they had followed up the recommendations obtained in the letter very fully and very earnestly. They had had the same experience in regard to soup as Dr. Talcott mentioned, and the soup was served just prior to the patients being seated, closing the windows of the dining-room at the time.

Dr. Hurd said that they had endeavored to carry these suggestions out very faithfully, and had done so with some minor exceptions, such as had already been mentioned. He also reported that by transferring the attendants to a dining room by themselves, and having them take their meals at a different time than the patients, in this way, although they had trained a great many patients to assist in the serving of food now three-fifths of the attendants waited on the patients during meal hours.

Dr. Blumer said that they had made a vast improvement in their food service as a result of the suggestions contained in the circular letter, and the instructions had been carried out almost in their entirety. They had not adopted to any great extent the recommendation that patients wait upon the tables, because they had thought they had enough attendants to perform that service satisfactorily. Part of the attendants took their meals in advance of the others—a sufficient number to minister to the needs of the patients. In the infirmary service, however, patients aid in looking after the tray service.

Several of the representatives stated that it was the practice to place pitchers of tea and coffee on the tables from which *the patients* were served.

Monthly Conferences

The chairman said that he believed that this practice was capable of being abused.

Commissioner Brown said that on the occasion of his recent inspection of the male department of the Manhattan State Hospital, in company with Commissioner Parkhurst, they had made a particular observation of the food service, and found that each table was provided with about three pitchers, holding over two quarts each, and that the patients helped themselves, and that they saw some patients take six or seven cups, and others would not get any.

Dr. Wagner stated that when the instructions were received from the Commission, he had them carefully transcribed, called the doctors together and gave each one a copy and instructed them personally to carry it out as far as possible, and they put it in operation in the various dining-rooms, and his personal observation was that it was successfully done and is carried out successfully at the present time.

The chairman said that he did not want the superintendents to think that the Commissioners were exercising themselves about trivial matters in looking into this matter very closely, but he was satisfied, and he believed that his associates were also satisfied, that a large part of the wastage of food supplies had come from the dining-room service. After another year's experience, he was still more satisfied that that was true, and that garbage could be very much lessened, gourmands could be regulated and controlled, and all the disagreeable features of dining-room service could be regulated by a strict disciplinary service. This service would not require an addition to the number of employees, as a large part of the work could be performed by patients who have sufficient judgment and intelligence to do it. He thought they could go a great deal further, and it was absolutely necessary that they should, as matters were looking very serious with the Commission from a business standpoint, and it was becoming a momentous question whether they would be able to get through another year with the moneys in hand until the next appropriation was available. In the matter of coffee for

Monthly Conferences

instance, one institution for 1,000 patients will use 1,500 pounds, and another 2,200 or 2,300 pounds. It seemed to him that there should be greater uniformity than that; that the matter should be regulated in some way, and he believed that the secret was to be found in the serving of the coffee, assuming that the coffee was made of about the same strength. It was known that coffee was not an absolutely requisite article of food, any more than tobacco was a requisite, yet it is allowed because it is a stimulant that everybody has become accustomed to; but it certainly was not necessary to use it in inordinate quantities or in excess, and he thought that the amount of those stimulating foods should be restricted, especially with the insane.

The chairman referred to the matter of the certification of the capacity of the state hospitals by the Commission. His associate commissioners had regarded this as a medical question, and had delegated it to him. He wanted the superintendents to feel that work was going to be performed fairly from the Commission's point of view. Points of view, of course, might differ, but the Commission had to look at the question without sentiment; sentiment could not enter into it at all. It was a business proposition with the state. All might feel that if a patient had 3,000, 4,000 or 5,000 cubic feet of air space, he probably would be hygienically a little better cared for than if he had only 500, 600 or 1,000 cubic feet, but yet it was not absolutely required, even to keep him in a sanitary condition. This certification of the capacity of the several hospitals by the Commission was required by an act of the legislature. A statement would be sent out in the form of an inquiry to the superintendents for their reply and criticism. The plans of the institutions would be used as far as possible, and the final determination of the capacity, which would necessarily be the certified capacity, would be based upon a consideration of the plans in connection with the replies and criticisms referred to. The acute insane should be given the space that they require, and as far as possible the conditions they require for their recovery, but as a matter of fact in all the hospitals it would be found that

Monthly Conferences

the very best accommodations are taken up not by a class of curable patients, but by a class of quiet, cleanly, neat patients, who are not curable, whose insanity has lasted for many years, and who have reached the secondary condition of mania or melancholia, with fixed delusions. There would be an opportunity for each superintendent to file a reply to the suggestions or inquiries made by the Commission, and they would be taken in detail and properly considered. The capacity of each room would be separately considered, and then the ward would be taken as a whole, taking out, of course, rooms used for other purposes, such as clothes rooms, attendants' rooms, etc.

The chairman read the following communication:

OFFICE OF THE FAIRBANKS CO.,

311 BROADWAY, NEW YORK, *May 17, 1898.*

Dr. P. M. WISE, *President State Board of Lunacy, Albany, N. Y.:*

My Dear Sir.—We beg to call your attention to a matter which I think should receive serious consideration at your hands. You will remember that some time ago your Commission adopted for the use of its hospitals the ware known as gold aluminum, and one point was made very clear to us, namely, that promptness in delivery was an important factor, and that your Commission could not wait for it to be made, and that a stock should be kept so as to facilitate delivery. With this view of the case, we sent to the factory manufacturing the ware an order for 500 gross of tea spoons, table spoons and forks, which order we supposed would be hardly more than enough for your temporary demands. The ware also had to be stamped “State Hospital,” and, furthermore, the pattern made was a pattern solely for the use of the hospitals, and not sold by us, or by the factory, to any other parties. It was my understanding that if we carried out to the fullest extent in our power all the above, that your board would see that should they give up the use of gold aluminum ware, they would take whatever the factory had on hand, and I think if you will recall all the circumstances in connection with the matter, you can but agree with me that that was the general understanding. Was not this your understanding of the case? When the state stopped buying the ware, the factory called upon us, stating that their understanding of the matter was similar to that which we have above stated, and claimed that you should

Monthly Conferences

take the ware which they had manufactured, and after carefully looking over the matter, we could only feel that we were in duty bound to pay them for it, and, therefore did so. We very frankly state that we feel under all the circumstances that there is at least some right in our asking of your board to relieve us of such ware as we manufactured for the hospitals.

We do not care to discuss the reasons why your board gave up the use of the ware, but we have not the slightest hesitation in stating that it not only will out-last any ware which you may have, but will always keep its color. It is true that it shows the presence of dirt much more quickly than silver, or other white metal, and while it does not take any longer to clean this ware than it does silver, yet the reason lies in an entirely different line. Silver or white metal ware that would pass for clean, would not be considered as clean, if in gold aluminum, but when both were thoroughly cleaned, the time taken in either case would be the same.

There are those who have used the ware, both in private houses and in institutions, who after some four years of use find the ware as perfect as the day they first purchased it. The objections raised that the ware is hard to clean, hardly seems a just criticism, from the fact that the same standard of cleanliness is not used in connection with the silver ware that is in this ware.

You will pardon this long letter, but I would ask that you consider this matter and present the same to your board, and if, as I believe, it was your real understanding that they should relieve us from the stock we had on hand, and as we have taken it from the factory on the same understanding that we now present to you, we hope that a favorable consideration on your part may be arrived at.

Yours very truly,

FAIRBANKS CO.,

W. STORRS WELLS,

President.

In regard to the matter, he said that the company was probably led to believe that the ware was adopted for some time, but as a matter of fact, there were very few hospitals that ordered the ware. This ware was made up, and he supposed it was also a fact that it could not be used for any other purpose, as it had the words "State Hospital" stamped upon it. While there was no legal demand probably for the hospitals to take this ware

Monthly Conferences

off their hands, there might be a moral one. He understood Mr. Wells, the president of the company, to state that they would make the price satisfactory, whatever would be paid for any other good ware. Hospitals in need of table-ware might bear this fact in mind, and purchase gold aluminum ware provided the price did not exceed that charged for the kind of table-ware now being used.

Commissioner Brown takes the chair.

Commissioner Brown stated that on the occasion of his recent inspections in company with Commissioner Parkhurst, they had noticed that the coffee was still ground too coarse. With the new method of filtration in use, it was not possible to obtain satisfactory results unless the coffee was very finely ground, and he recommended that the hospitals purchase burrstone mills for grinding their coffee.

Mr. Wheeler stated that the address of the firm manufacturing these burrstone mills was No. 17 Broadway, New York.

Commissioner Brown said that in view of the existence of the war and the present unsettled state of affairs in general the Commission felt obliged, in view of possible future contingencies and the prevalence of war prices, to use extreme care in the revision of estimates, and gave notice that nothing would be allowed in the estimates except what was absolutely necessary.

Commissioner Brown called attention to the matter of bathing. He had been informed by the engineer at one hospital that it was absolutely necessary owing to the great quantity of hot water required for bathing, to incur an expenditure of about \$1,500 to enlarge the pipes, and that it was admitted that if the quantity of water could be materially reduced, that expenditure would not be at all necessary. It should be borne in mind that the quantity of water used in tub bathing as compared with spray bathing was in the proportion of 3 to 1—that is three times as much water was required to bathe a person by the tub process, three gallons being required on an average by the spray method and at least twenty-one gallons by the tub. The average temperature of water throughout the year is about 50

Monthly Conferences

degrees and for ordinary bathing purposes it is necessary to bring it up to a temperature of about 110 degrees. The enormous cost of raising water to this high temperature could be readily seen. He earnestly advocated that the method of spray bathing be generally adopted. He called attention to the fact that the use of complicated fixtures in connection with spray baths was entirely unnecessary, as had been shown by experience, and as a matter of economy they should be dispensed with.

President Wise called attention to the fact that hydrotherapies was used to a very small degree in the medical service of the New York state hospitals, although recognized in Germany as the most valuable therapeutic measure in psychiatry. When assistant physicians are questioned in regard to it, they claim that they have no facilities. The matter was brought up at Utica, and he recommended in his notes that apparatus be put in. The expense of this change would be about \$80. He desired to call attention to this matter as he considered it one of the weaknesses of the medical service in the hospitals.

Commissioner Brown read the following letter from the director of the New York Agricultural Experiment Station at Geneva, in regard to the use of brewers' grains for feeding cows:

NEW YORK AGRICULTURAL EXPERIMENT STATION,

GENEVA, N. Y., May 24, 1898.

T. E. MCGARR, *Secretary State Lunacy Commission, Albany, N. Y.:*

Dear Sir.—Your letter of recent date, inquiring concerning the use of brewers' grains for feeding cows, is before me. You do not state whether you refer to wet grains or dried grains. The dried grains are at present a commercial article which, at present prices, are one of the cheapest sources of nitrogenous feed for dairy animals. Those grains may be as safely fed with reference to both the health of the animals and the quality of product as any other grain, provided overfeeding is not indulged in. A daily grain ration of from six to eight pounds may safely contain two or three pounds of dried brewers' grains. You understand, of course, that this material is classed with the highly nitrogenous feeding stuffs and serves as an admirable supplement to the corn products and the ordinary coarse

Monthly Conferences

fodders of the farm. The wet grains may also be safely fed, provided they are eaten as they come fresh from the brewery and are not allowed to ferment seriously. Great care should be taken, however, to feed only in moderation. I would not advise the use of wet brewers' grains as the sole grain ration but rather as part of the grain ration. The bad reputation which wet brewers' grains have at the present time is undoubtedly due to the feeding of over-fermented grains and to feeding in excessive quantities.

Yours truly,

W. H. JORDAN,

Director.

President Wise gave notice that the conference in the latter part of July would be held for the consideration of the estimates for the months of August and September, the last two months of the present fiscal year.

Commissioner Brown called attention to the fact that the hospitals showed great lack of uniformity in the use of official envelopes and on motion of Dr. Talcott, Dr. Blumer was appointed a committee to select sizes and prepare a uniform set for the use of the hospitals.

Dr. Pilgrim called attention to the desirability of having uniform rules and regulations for the guidance of the hospitals.

After considerable discussion, Dr. Blumer moved that Drs. Hurd and Wagner be appointed a committee on uniform rules and regulations.

On motion of Dr. Talcott, Dr. Macy was requested to furnish a copy of the new rules and regulations of the Willard State Hospital at the next conference.

Dr. Blumer referred to the difficulty of obtaining competent recruits to the medical service from the eligible list of the State Civil Service Commission.

On motion, Drs. Blumer, Talcott and Pilgrim were appointed a committee to draft a memorial to the Civil Service Commission with reference to any needed changes in regard to the civil service rules as may relate to the medical officers of the hospitals.

On motion of Dr. Talcott, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

Monthly Conferences

STATE HOSPITALS—JULY ESTIMATES—1898

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held June 30, 1898.

Present.—Commissioners Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, W. L. Russell, M. D., first assistant physician; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, A. E. Macdonald, M. D., general superintendent; Collins State Homeopathic Hospital, D. H. Arthur, M. D., medical superintendent.

Commissioner Brown, chairman.

Dr. Pilgrim stated that they had installed the air compressor apparatus at Hudson River, and had made use of it in cleaning carpets and rugs, but not to much extent thus far in the cleaning of clothing. Its work had been satisfactorily done.

Commissioner Brown explained that it was only expected to remove the dust from clothing; spots would have to be taken out with naphtha. He thought that sufficient experience had been had to justify the introduction of air compressors into the State hospitals.

Commissioner Brown stated that it was to be understood that the conference to be held in the later part of July would consider the estimates for the months of August and September, and he desired to say that the finances would require very careful consideration, and the Commission would send out a statement in a day or two showing the amount of money which each hospital

Monthly Conferences

could expend up to the first of October. The legislature had been assured that the per capita cost would come down to the rate which prevailed two years ago, namely, \$186. The Commission had felt obliged last month to make quite extensive reductions, and it would be necessary to pursue the same course this month, because, in view of the great expense to which the state was being put on account of the war, it would not do to exceed the amount which the legislature had been informed would be sufficient.

Dr. Hurd, from the committee on uniform rules and regulations, reported progress.

Commissioner Brown stated that, to his surprise, he had been informed that under the rulings of the Civil Service Commission, candidates for appointment to the state hospital medical service were not required to pass the state examination. If that was true, it seemed to him it was a matter that should be remedied.

Dr. Blumer submitted the following majority report of the committee appointed at the last conference to memorialize the State Civil Service Commission with reference to desirable changes in the civil service rules.

To the Civil Service Commission, Albany, N. Y.:

Gentlemen.—We, the undersigned, medical superintendents of state hospitals, having been appointed a committee, at a conference of medical superintendents with the State Commission in Lunacy, to memorialize your honorable Commission with a view to obtaining by your gracious consent such modification of present requirements as shall, in their judgment, enure to the welfare of the state hospitals medical service, have the honor to call your attention to the following considerations and desiderata:

1. We desire to express our hearty approval of the principle of open competition in all medical appointments and to commend the broad and tolerant spirit in which that principle has been enforced. We also extend our thanks to the Civil Service Commission for its cordial co-operation with the state hospitals in all things that make for the betterment of the service.

2. By the laws of 1893, chapter 661, section 152, any person while actually serving on the resident medical staff of any legally

Monthly Conferences

incorporated hospital is exempt from the legal provisions relative to the practice of medicine. We believe that this exemption was conceived in the interest of medical education and intended to cover only hospitals as generally understood, not state hospitals for the insane. It seems to us an incongruity thus to declare to the people of the state our willingness to take into our institutions as practicing physicians men who, although graduates of a medical college, are not fully qualified under the statute to practice their profession outside. We should therefore approve a rule that would be the means of withholding permanent appointment in the service from such candidates, successful in open competition, as shall not have passed the regents' examinations required by the state law.

3. We believe that the qualification legally to practice medicine in the state of New York should be considered a sufficient warrant of eligibility to undergo examination for any medical appointment, other than that of medical superintendent, provided all other requirements shall be fulfilled.

4. The anomaly that metropolitan candidates are in notorious minority at all open competitions seems to indicate either that examinations are held at inconvenient times and places or that they are insufficiently advertised. We are of opinion that examinations should be conducted in New York city as well as in Albany, at times of commencement, and when young physicians, the pick of the schools, are completing their terms of service at the great general hospitals of the state. To like purpose is the suggestion that no pains be spared to advertise examinations on the bulletin boards of medical schools and general hospitals at times when young men, rich in endowment but poor in pocket, are brought face to face with the bread-and-butter problem of life.

5. We question the propriety of restricting eligibility by a time limit of one year in the case of internes and assistant physicians and recommend the extension of the period to three years.

6. We are sincerely desirous of securing for the medical service of the state men not only who are well educated in their profession but physicians of broad, general culture. We recommend, therefore, that in all examinations for junior positions the Civil Service Commission apply in its merit examination such test as in its judgment shall best determine the degree of the candidate's general culture.

Respectfully submitted,

G. ALDER BLUMER,
SELDEN H. TALCOTT.

June 30, 1898.

Monthly Conferences

Dr. Blumer stated that Dr. Pilgrim, the third member of the committee, was unwilling to sign the report.

Commissioner Brown inquired whether it was not now provided that appointments to the state hospital service should only be from residents of the state.

Dr. Pilgrim replied that it was not; that an exception was now made in the case of medical internes and junior assistant physicians, who could come up for examination from any state in the Union.

Commissioner Brown said that it was an easy matter for a person to change his residence. He had in mind a recent case where a man had come into the state from Massachusetts, and took up his residence in this state, and had obtained an appointment. A man could change his residence in twenty-four hours; it is a matter of intention. As a practical question, he thought there would be very little difficulty on that point.

Dr. Pilgrim stated that was the particular point in which he disagreed with Dr. Blumer, because as they could be appointed medical internes and junior physicians, by the time they were qualified for more important positions they were residents of the state and therefore eligible.

Dr. Blumer stated that he was glad that Dr. Pilgrim had explained his position a little more fully, but he would like to take up a little of the time of the conference in order to elucidate the position of Dr. Talcott and himself. It had always seemed to him an extremely narrow policy that excluded from the service of this or any other state in the Union men who are American citizens. Especially at this time, during this Spanish-American war, did it seem to him important that they should realize before all else that they were American citizens and American citizens only. What difference could it possibly make so far as a man's medical service was concerned whether he were a resident of Massachusetts, Pennsylvania, Ohio, or any other state; that while it might be true that New York was the Empire state, it was an assumption unwarranted by the facts, he thought, that the very best men in the United States were to be found in this

Monthly Conferences

state only. He could conceive of a situation occurring in any state hospital where it might seem desirable to secure the services of some resident of a neighboring state, and to give him the position on the staff to which his transcendent merits entitled him. Under the present rule it was necessary for a man to enter the service as a junior, which prevents the state of New York from securing the benefit of the services of men who have acquired their experience and attained higher rank in other states than this.

Dr. Howard inquired if it was not a fact that a man could not come from another state and enter into the general practice of medicine.

Dr. Blumer replied that a man could practice medicine in this state if he were a graduate of a medical college and had passed the regents' examination.

Dr. Pilgrim expressed his belief that to appoint men from outside the state over the heads of members of the present medical staffs would have an unfortunate effect upon the service.

Dr. Blumer said that, on the contrary, he thought it would have a decidedly stimulating effect.

Dr. Wagner stated that he had listened to Dr. Blumer's report with a great deal of interest, and he thought that in the main it was an admirable report, but he agreed with Drs. Mahon and Pilgrim that it would be the greatest mistake in the world to open the door any wider than it is now for the appointment of men non-residents of the state of New York. It was all well enough to talk about being American citizens, and drawing from the whole length and breadth of the land, but he thought that it was not a fact that other states could produce better men than the state of New York, with a population of 8,000,000 people. He thought it would be the greatest mistake in the world to say to the men in the service that no matter if they had served ever so faithfully five or ten years in the lower positions, and were on the threshold of appointment to the better places, some man might come from Ohio or Massachusetts, as has been the case in the past—attempts of this kind had been made—and obtain the

Monthly Conferences

positions that are available for men just as good in the state of New York, and he wanted to record his protest against any such memorial going to the Civil Service Commission.

Dr. Pilgrim stated that he had already expressed his views about as fully as he could, and that Dr. Wagner had supplemented them, and had said just exactly what he would have said. If the restrictions were to be removed in regard to superintendents, he did not see why the restrictions surrounding the appointment of the medical member of the State Commission in Lunacy should not also be removed.

Dr. Dewing stated that he was in accord with the views of Dr. Wagner, as expressed by him.

Dr. Hurd said that he thought the difficulty could be removed if the memorial should provide for throwing open examinations for assistant physicians to those who are eligible for practice in the state of New York.

Dr. Macdonald said he believed the provision in regard to the passing of the regents' examination would remedy the matter.

Dr. Russell expressed his opinion that the point in regard to the regents' examination would cover the whole ground, certainly in regard to the lower positions. In regard to the higher positions, he thought that the matter of citizenship of the state should still remain.

Dr. Talcott stated that it seemed to him that the object of the resolutions was simply for the purpose of securing the best possible officers for the state service. He did not see anything in the resolutions that looked like opposing progress on the part of those who are already in the state service. It seemed to him the most natural thing in the world for each superintendent to try to reward his assistants by promotion whenever possible or practicable to do so, and if at any time a superintendent goes outside of the state, it is because he thinks he can get better assistants outside. A good many men will enter the service from other states who think they are going to do well here, while many residents of this state have failed to enter the service or

Monthly Conferences

have failed to apply for the service because they do not appreciate its benefits.

Dr. Howard said that in order to accomplish the result desired the report of the committee would have to be amended in the matter of the question brought up by Dr. Hurd, and he would call that up because it was quite important. It seemed to him that it was time enough to take a man into the state service and pay him \$50 per month after he was legally qualified to practice medicine in the state of New York, and he had been surprised to find that it was not always the custom. He thought there were plenty of men available if proper efforts were made to find them. He did not think the higher officials of the state government would consent to the appointment of superintendents of the state hospitals from outside the state. That principle had been opposed by Governor Hill, who had put his foot upon it effectually, and he thought that the next governor who had the same question brought to his attention would act in a similar manner.

Dr. Arthur said that he was not in favor of extending the free list beyond what it now was.

Dr. Mabon stated that he had no objection to men who have qualified to practice in the state of New York entering positions up to the grade of medical superintendent, but he did not think the door should be thrown wide open to men outside for that position. A western hospital man had told him that he would sooner have a position as junior assistant in New York state than he would first assistant in the state where he was, almost in preference to that of medical superintendent. A man qualified to practice medicine in New York state could very readily assume the position perhaps of junior assistant or assistant physician, or even first assistant, after a competitive examination, but not the position of medical superintendent.

Commissioner Brown said that, as he understood it, if this report were adopted, it would permit the Civil Service Commission so to amend the rules that practically a non-resident might be eligible for appointment as first assistant physician or superintendent or other grades. He thought all were agreed about the

Monthly Conferences

broad catholicity, so to speak, of this matter, that is, if it was a practicable thing to do. He was in entire sympathy with that Dr. Blumer had said in regard to obtaining the best medical service, but there were objections it seemed to him to that scheme in that it had been the aim and effort on the part of the state hospitals for a long time to build up the best service in the country. The young men who entered the service soon after graduation were told practically that they were morally certain, such of them as were qualified, to obtain recognition in the future, and he would venture to say that there were tens and dozens of young men in the service to-day who looked forward to being promoted either to the position of first assistant physician or superintendent. Now he would not want to throw a stone in the pathway of these young men; he was thoroughly in favor of the broadest most advanced and most liberal medical education. He believed that the state of New York ought to be pre-eminent in this department and he believed that it was. The only question which arose here was as to whether this proposed scheme might not have a dampening and discouraging effect on the young men who are members of the staffs of the state hospitals to-day, if such a change were made in the civil service regulations.

Dr. Blumer said that, acting upon the wise suggestion made by Dr. Hurd, and as amplified still further by Dr. Mabon, he would submit the following amendment to section 3. Instead of stating that "We believe that the field of choice should be unrestricted, to which end we respectfully recommend that American citizenship alone, irrespective of state residence, should be considered a sufficient warrant of eligibility to undergo examination for any medical appointment, provided all other requirements shall be fulfilled," he would substitute the following: "We believe that the qualification legally to practice medicine in the state of New York should be considered a sufficient warrant of eligibility to undergo examination for any medical appointment, other than that of medical superintendent, provided all other requirements shall be fulfilled."

Monthly Conferences

Dr. Macdonald moved that the memorial be adopted with the exception of section 3.

Seconded by Dr. Wagner.

After some further discussion of the matter, Dr. Hurd suggested that the matter be deferred one month.

Dr. Macdonald withdrew his motion.

Dr. Mabon thereupon moved that the matter be deferred one month, and that in the meantime the memorial be printed and distributed to the various institutions in the state.

Carried unanimously.

Dr. Pilgrim read to the conference a report made by Miss Newbold, manager, at the last meeting of the board of managers of the Hudson River State Hospital, as follows:

"The exposition held in New York was closed June 1st, and I am glad to report that the exhibit from state hospitals was very successful, and was awarded a bronze medal. Great interest was shown by the public in this exhibit and our nurses appeared to great advantage. I think it is the first time they have taken the proper position (which was due to their training) among their colleagues of other great hospitals. I think an injustice is done to these women by letting dining-room girls, chambermaids, etc., wear the same uniform. I would therefore suggest that only the graduates of the training school should be allowed to wear the *toile du nord* dress; and that the attendants, maids, etc., should wear striped blue and white.

In all hospitals small badges are given nurses on graduation, and I would suggest a small brooch with the arms of the state in the center surrounded by a colored ribbon on which the name of each hospital could be engraved. The same design made smaller could be on a button for male nurses.

Respectfully submitted,

CATHERINE A. NEWBOLD.

Dr. Pilgrim also read the following resolution adopted by the board of managers of the Hudson River State Hospital in regard to the above matter:

"*Resolved*, That the recommendation of Miss Newbold as to the presentation of badges to the graduating nurses and as to the distinctive uniform to be worn by them, be approved, and the Lunacy Commission be urged by the managers to permit the furnishing of such badges and the wearing of such uniforms."

Monthly Conferences

Dr. Blumer moved that a committee be appointed to consider the subject of some designation in the way of a badge or button for graduates of training schools.

Carried unanimously.

The chairman appointed as such committee Drs. Wagner, Dewing and Dent.

The matter of the transfer of patients from one institution to another was brought up by Dr. Blumer, having reference to the recent transfer of fifty patients from the Manhattan to the Utica State Hospital, and was discussed at length by the conference.

Dr. Blumer moved that hereafter when patients, to exceed twenty in number, are transferred from one state hospital to another, the superintendent from whose hospital the patients are to be sent shall send to the Lunacy Commission a list of names, together with complete histories as transcribed from the case-books and duly attested.

Commissioner Brown suggested that, inasmuch as this procedure might occasionally involve a large amount of labor on account of the length of some of the case histories, it might be well to amend Dr. Blumer's motion by providing for the furnishing of a brief general description of the patient and his history.

Dr. Blumer stated that he would accept the suggestion made by Commissioner Brown, and the motion as revised was seconded by Dr. Mabon and adopted by the following vote:

Ayes—Drs. Arthur, Mabon, Hurd, Russell, Howard, Blumer, Wagner—7.

Noes—Drs. Pilgrim, Dewing, Macdonald, Talcott—4.

Dr. Mabon stated that the report of the committee on the joint purchase of supplies provided for the appointment of a committee of stewards to look into the matter of what additional purchases could be made, and a further recommendation was made that instead of having samples submitted, the committee should select samples and have the bidders base their proposals upon the same, and he would therefore move that a committee of stewards be appointed to consider the matter of the joint purchase of supplies and to report to the conference of superintendents with the State Commission in Lunacy at the July meeting.

Monthly Conferences

The motion was seconded and unanimously adopted.

The chairman appointed as such committee Stewards Gilbert, Remington and Cole.

Dr. Mabon submitted the following report of the committee on training schools:

REPORT OF THE COMMITTEE ON TRAINING SCHOOLS.

June 23, 1898.

To the Conference:

Your committee to examine members of the junior and senior classes desires to report that it has examined 234 members of the senior class, of which 229 passed and 5 failed. The examination was held May 19th and only those in each school were eligible who were certified by the superintendents of the respective hospitals.

The examinations for the juniors was held on the same date and 326 candidates were examined, of which 293 passed and 33 failed.

A list of the successful candidates was sent to each superintendent and also to the State Commission in Lunacy.

Respectfully submitted,

WILLIAM MABON,
E. H. HOWARD,
SELDEN H. TALCOTT,
Committee.

On motion of Dr. Wagner the report was adopted.

Dr. Mabon moved that the committee on training schools prepare a list of all the graduates of the training schools to be sent to each superintendent, and also to the State Commission in Lunacy, as well as a list of junior members who have passed the junior examination this year, and that the junior list and graduated list be extended from year to year after the examinations are held.

The motion was seconded and unanimously adopted.

Dr. Mabon called attention to the fact that under the present system the training school course consisted of only twenty-one months instead of two years. Examinations for entrance to the training schools were now held in September and for graduation in June.

Monthly Conferences

Dr. Wagner moved that examinations for entrance to the training schools be held in September, and that the increase of pay of graduates of the training schools date from the first of October. Carried.

It was understood that this should not apply to the persons who passed the last examinations.

Dr. Mabon suggested that in view of the magnitude of the work now devolving upon the committee of superintendents in connection with the preparation of examination papers and the holding of examinations it might be well to delegate the work to a committee consisting of first assistant physicians.

Dr. Wagner expressed his opinion that the results might not have as much weight as if the work was at least nominally performed by a committee of superintendents, and he would therefore suggest that the committee be a committee of superintendents, but that such committee might be empowered to appoint a subcommittee to do the actual work.

Dr. Pilgrim moved that the committee consist of superintendents, who may have the power of delegating the work to assistant physicians as a subcommittee, but that the diplomas should be signed by the committee of superintendents.

The motion was seconded by Dr. Howard, and adopted by the following vote:

Ayes—Drs. Arthur, Wagner, Pilgrim, Dewing, Macdonald, Russell, Talcott, Howard—8.

Noes—Drs. Mabon, Hurd, Blumer—3.

Dr. Mabon stated that the present committee on training schools had now served two years, and he as chairman of the committee thought that a new committee should be appointed, and he would therefore move that a new committee on training schools be appointed.

Seconded by Dr. Howard and adopted.

The matter of the appointment of the committee was deferred, owing to the absence of Commissioner Wise.

Dr. Mabon expressed his belief that inasmuch as the number of graduates was rapidly increasing, and involved a largely increased

Monthly Conferences

expenditure on account of the increased rate of wages, the examination for entrance to the training school should be more severe, and should thoroughly test the qualifications for entrance.

Dr. Pilgrim said that he believed that the committee should be free to act as they saw fit in this matter; the committee was appointed to do the work for the conference, and if it was the sense of the conference that the entrance examination should be of a higher standard than it has been in the past, it would be the duty of the committee to carry out that suggestion.

Dr. Pilgrim offered his opinion in the form of a motion, and it was seconded by Dr. Blumer and adopted.

Dr. Blumer asked that Dr. Macy be substituted for himself as a committee to report upon a uniform series of envelopes for the use of the state hospitals, and, on motion of Dr. Howard, Dr. Blumer's resignation was accepted, and Dr. Macy was appointed in his stead.

Dr. Mabon moved that the old dietary committee be continued to prepare a dietary for the months of August and September.

The motion was seconded, and adopted by the following vote:

Ayes—Drs. Arthur, Mabon, Hurd, Russell, Howard, Blumer—6.
Noes—Drs. Pilgrim, Dewing, Macdonald, Talcott—4.

Dr. Pilgrim stated that owing to the short space of time intervening before the making up of the August and September estimates, it would be impossible for the committee to prepare a new dietary.

In view of Dr. Pilgrim's statement, it was determined to continue the present dietary for the months of August and September.

Commissioner Brown said that the experiment of mixing 25 per cent. of corn flour with the wheat flour in the making of bread had shown generally satisfactory results, and that the Commission in revising the July estimates would take this proportion into consideration.

Commissioner Brown stated that the Comptroller held that the checks issued by the state would be exempt from the payment of

Monthly Conferences

internal revenue tax, and that the hospitals should govern themselves accordingly.

Commissioner Brown suggested the use by the hospitals of half-skim cheese, which could be purchased at from five to six cents per pound. He was of the opinion that Prof. Atwater had expressed his opinion that it was as nutritious as full cream cheese.

Dr. Howard said that Dr. Atwater had stated that skimmed cheese was not nearly as nutritious.

Commissioner Brown said that the Commission was of the opinion that beef should be corned by the hospitals, inasmuch as that purchased in the open market was apt to be of inferior quality, and that this recommendation would be inserted in the revision of the estimates.

On motion of Dr. Blumer, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

**STATE HOSPITALS—AUGUST AND SEPTEMBER
ESTIMATES—1898.**

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held July 29, 1898:

Present—Commissioners Wise, Brown and Parkhurst; Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, Wm. A. Macy, M. D., medical superintendent; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Mr. Leonard, steward; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Chas. G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, E. C. Dent, M. D., medical superintendent, female department, Ward's Island; Collins State

Monthly Conferences

Homeopathic Hospital, D. H. Arthur, M. D., medical superintendent.

President Wise, chairman ex-officio.

President Wise stated that he thought it proper and just to say at this time when they could consider not only the expenditures for the year thus far for maintenance, but when they had before them the estimates for the remainder of the fiscal year, that in his estimation the hospitals had done marvelously well. He thought that the institutions and superintendents deserved a great deal of credit for the work of the year in the matter of expenditures, and that, as far as his observation went, he believed progress had been made. He thought there had been an improvement in the service, in the appearance of the institutions, and if criticism could be placed anywhere, it might be in the fact probably that repairs had not been kept up to the fullest degree, especially repairs of an extraordinary nature.

They had before them the expenditures for the corresponding nine months of three years (for the years 1894 and 1895); before Long Island and Manhattan came into the system the monthly per capita cost was \$16.29; for the years 1895-1896 Long Island being included for the whole period and Manhattan for a period of four months—the monthly per capita cost was \$16.12; for the years 1896-1897—all institutions—the monthly per capita cost was \$17.24, and for the nine months of the present fiscal year it is \$16.135, slightly above the cost of 1895-1896, but considerably below that of last year. It must be recognized that during the early part of the fiscal years 1896-1897 there was quite a decided spurt in expenditures which could not be recovered during the last half of the year, but that this year, in spite of higher prices for supplies and the fact that the schedule of salaries and wages necessarily shows a constant tendency to increase the aggregate expenditures for this purpose, the cost has been brought down to that of the fiscal year 1895-1896 without, he believed, materially lowering the standard, and he thought in many respects the standard of service had been improved. It

Monthly Conferences

might be that the variety of food supplies had been somewhat reduced, but he considered that unimportant.

At this time he desired to acknowledge the due which belonged to the superintendents in assisting the Commission in this work of trying to reduce expenditures. He regretted to say that the Commission found that they had not the money to carry on some extraordinary work, repairs and improvements that really seemed necessary, but he believed that each one appreciated this fact, and realized that if the funds were in hand the Commission would be only too willing to do this work.

He believed that at this time it would be well to look forward a little into the future and especially to the coming session of the legislature, and that after election, when it shall have been determined by whom the several districts will be represented, the superintendents ought to make every effort to influence legislative sentiment for the coming winter. He thought that there was a general and quite widespread feeling in the community that the aggregate expenditures for the purpose of maintaining the insane are very large, and perhaps larger than they should be, and he believed that this was largely due to the fact that the matter is not fully understood by the public at large. He thought it would be well for the superintendents from time to time to invite members of the legislature in their immediate vicinity to visit the hospital and to show them the necessity of administering certain care and treatment to certain classes of patients and to the extraordinary requirements of the hospital generally. He had recently called the attention of one of the state senators to the fact that previous to the going into effect of the present system of state care, when the county system was in vogue, scarcely a day passed without some mention by the press in some portion of the state of instances of abuse of the insane, and he also called his attention to the fact that during the last few years this had almost disappeared, and was well shown by the confidence in which the hospitals were held by the public, and this confidence it might be said in some respects is becoming almost too great on account of the demand for the retention in the hos-

Monthly Conferences

pitals of cases that really do not properly belong there, and the superintendents are embarrassed from the fact that friends are so willing to have patients remain in the hospitals that they will not remove them, even when in the judgment of the superintendent they are in a condition to be cared for at home.

The Commission has prepared a table showing the expenditures for the year, based upon expenditures for nine months according to treasurer's reports, together with the estimates for the remaining three months of the year, which gives a sufficiently correct idea of the probable expenditures for the year. He had taken the amount expended for food supplies, water and ice in estimate No. 3, leaving out of consideration crockery and glassware and all other items of that character, which amounted to \$1,200,000 and dividing this by the average number of officers, employees and patients the per capita cost amounted to a trifle less than 13 cents a day, or a little less than 4 cents a meal, and in the estimation of the Commission, this represented a minimum expenditure for such a purpose. He did not believe that they would be justified in making it any smaller. To this amount, however, should be added about 5 per cent. for farm products.

He said that the Commission had employed Prof. Atwater to study the dietary question and he was at present engaged in this work, and was about to start for Europe, where he would meet with men in Great Britain and on the continent who were interested in this subject, and would try to get more data from the institutions for the insane there. He said that Prof. Atwater had already made a comparative table of food values expressed in energy units known as calories. The Flint dietary represented in round numbers 3,900 calories; the dietary used at the Utica State Hospital represented 3,500 calories, and a dietary such as is used in this country among the class of people known as active workers and moderate workers represented about 2,900 calories. Prof. Atwater was not willing to put his name to a report of this kind as he was going to give the matter closer attention. The data which Prof. Atwater had obtained from English institutions

Monthly Conferences

show that they are very much below the New York state institutions in their dietary standards.

Commissioner Brown in reply to an inquiry as to the purpose of the investigation of the departments and institutions of the state now in progress, said that this investigation was to be more particularly in regard to the salaries paid employees in the state departments than in regard to the state institutions; that the salaries paid were not at all uniform, and the object was to bring about some sort of a classification similar to that which prevails in the United States government. In this connection he said that the state hospitals of New York were the only department of the state government to-day which had a uniform schedule of salaries and wages. In getting this information the committee, of course, had to call upon all and the Commission had requested that the blanks which the hospitals were to fill out should be sent to the office of the Commission where a wage schedule would be attached and the matter would then be sent in as a whole. This course had been suggested by some members of the committee. He said that he very heartily concurred in the suggestion of President Wise as to the propriety of endeavoring to properly inform incoming members of the legislature regarding the state-care system and the needs of the state hospitals in general.

President Wise requested the members of the conference to express their individual views in regard to the matter of the present standard of care maintained during the past year as compared with that of two years ago.

Dr. Wagner stated that he did not think there had been a reduction. He felt that they had been obliged to curtail their facilities in some directions more than they ought to have done and more than he hoped they would be obliged to do next year, but taking it all in all he felt that at the Binghamton State Hospital they had not reduced the standard of care.

Dr. Pilgrim said that he did not think that the standard had been reduced. He thought that perhaps in the matter of embellishments and desirable improvements they had been limited

Monthly Conferences

considerably, but otherwise he thought that the patients were living as well and that they were being clothed as well and cared for as well as they had ever been during the 16 years that he had been engaged in the work.

Mr. Leonard said that at Middletown he could not recall that they had suffered in any particular; that their efforts had been mostly directed to caring for the persons of the patients and that as Dr. Pilgrim had stated, they had only suffered in the matter of extraordinary repairs, etc.

Dr. Dent said that he thought there was a difference; that some things were not allowed now which they had formerly received, for instance, poultry, clams, etc., were not now allowed.

Dr. Dewing said that in regard to the main object, that of the care of patients, their clothing, food, etc., as a whole the standard had been raised; that in some instances the institution—the buildings—may not have been kept in as good shape as they might have been if they had not had to be so economical.

Commissioner Parkhurst inquired if the buildings at Long Island had not been materially improved.

Dr. Dewing replied that in general they had, but that there were some respects in which they had not.

Dr. Howard stated that he was able to say so far as the comparison between what the patients received at the Rochester State Hospital under state care with what they had received when they were under county care was concerned, it was very, very much better; that the patients were cared for much better in every way. With regard to the present year they had not done quite as well as they had last year, or the year before, but he thought that in the flush of living under the state system they probably went to the extreme of doing better than was hardly appropriate or right. This was probably so and at the present time he considered the patients receive very excellent care, food, nursing and attendance, and he knew that the community was very well satisfied; that the profession was very well satisfied, and are grateful to the Commission for the improved condition

Monthly Conferences

of the institutions, and had gone out of their way to express it in a way that had been very gratifying to him.

Dr. Mabon said that he did not think the standard had been lowered in any particular, but that the reducing of the expenditures had resulted in making the superintendents more careful about waste. He thought that the closer attention to the details which the superintendents had given had also tended to increase the standard in some ways, so that an acute class of patients, for instance, received a better standard than a chronic, and that he believed that there should be a distinction between the two grades; that it had been his experience that all classes uniformly heretofore had received nearly the same standard of care, and he believed that a greater effort should be made to concentrate their efforts toward uplifting the medical and creature comforts of acute cases, and it seemed to him that there was room for great improvement in the preparation of the dietary; that there should be a larger latitude for the acute cases, and that less should be given to the chronic insane than they now received.

Dr. Blumer stated that he believed that the standard of care had distinctly appreciated at the Utica State Hospital notwithstanding the hard times, and he would say that because he knew that as regards diet they had been able to grow vegetables of greater variety and in greater abundance than ever before, and the patients lived unmistakably better. There was only one particular in which they had suffered, and that hardship had not been very severe, and that was in the matter of furniture. The buildings were in very fair repair before the necessity for a stringent economy arose, and funds for that purpose had not been urgently needed perhaps. On the whole, he believed that he might truthfully say that the standard had appreciated and that moreover great benefit had accrued to the hospital from the adoption of a colony system at the institution, enabling them to maintain a large number of their patients at a less cost and enabling them also to make those patients very comfortable because they led a more natural life than was possible for them before.

Monthly Conferences

Dr. Macy said that as far as the standard was concerned, he had not been in the state service long enough to make very much of a comparison with what it was two years ago. His experience did not extend back that far, but he thought he should say very much as Dr. Pilgrim had said, that the lack of money had possibly kept them back more in the way of extraordinary improvements, repairs and matters of that kind. He thought from what he had seen that otherwise there had been no marked deterioration or anything of the sort, but rather that they had been able to go on progressively. On account of the great changes which had been made in the dietary lists some embarrassment might possibly have been caused at certain periods, but on the whole he could say that the change had been a progressive one for the better.

Dr. Hurd said, speaking for Buffalo, that he thought perhaps in some respects as regards food, the variety had been a little curtailed, yet on the whole for the ordinary class of patients he did not think the standard of care had been depressed, and as regards the acute insane that the standard and the means and facilities for their care had been very much improved. In only one respect, which he hated to repeat, as everyone had mentioned it, he thought that they had suffered a little on account of the deferring of certain very necessary changes or renewals on some of the wards on account of the necessity for economy, but so far as the essentials were concerned, the housing, clothing, feeding of patients, he did not think the standard had been depressed.

President Wise said that it was most gratifying to the Commission to hear these expressions of comparisons between now and the period when so much more money was available, and it must also be admitted that the statements of the superintendents in regard to matters not absolutely essential for the welfare of patients at the present time had had to be overlooked or deferred. He thought that there was such a thing as reducing expenditures for maintenance of grounds, buildings and furniture, etc., to too great a degree, and he felt that an effort should be made to obtain some funds to apply to these purposes. He could state from the

Monthly Conferences

experience he had some fifteen years ago at the Willard State Hospital when they had to go without furniture and equipment of almost every kind for a year or two, how difficult it was, almost insurmountable, to recover from it. He thought that applied to the environment of the institution in some degree and believed that the grounds should not be neglected. He believed that it was their duty to look out for the future of the hospitals and for another generation, so to speak, but there had been times—and the past year had been such a time—when they could not do it safely; it was impossible to look forward to any extraordinary expenditures beyond such as seemed absolutely essential.

With reference to what Dr. Dent had said he regretted that he had said it; he really believed that he should have had a different record in regard to his statement, because it was a notorious fact which was known by almost everyone, that the standard and administration of New York city institutions as regards supplies, at least, and in a large measure as regards service, had been hampered under the city system by political methods, and that the change to state care had been exceedingly for the better.

Dr. Dent replied that he would not hesitate to say that there had been some improvement in the institution. He did not mean to imply that there had not been.

President Wise appealed to his judgment and said he thought there had been a great improvement. He had been only a visitor there previously, but he had seen the improvement everywhere—in their service, in the general appearance of the institution, and he did not suppose there was an item in the way of furniture and supplies of any kind, or repairs, or a single feature of the administration of the institution but what had improved. It was a notorious fact which Dr. Macdonald had acknowledged himself, that under the city administration they could not get money for repairs. He thought it was an unfortunate feature, but it had presented itself frequently and he had been very much pained to see it, that the present administration was so derelict in recognizing and appreciating this change, and in giving credit where credit was due. He thought to-day, and he really thought every super-

Monthly Conferences

intendent outside of New York was of the same opinion, that if the state should go back where it was three or four years ago without the incumbrance of the New York institution upon it, matters would be in a much better situation to-day than they are.

Commissioner Brown said that Dr. Macdonald had maintained that the cost of food supplies under the city administration had been 17 cents per day. In looking through the published reports of the Manhattan State Hospital for the years 1889 to 1893, inclusive—and in fact the only printed reports of the institution available—it appeared that the highest rate during that time prevailed in the year 1893, when it closely approximated 17 cents. The present rate for the first six months of this fiscal year for food supplies alone, had been almost 20 cents, a difference in favor of the present system of 3 cents. Moreover, the amount paid out in bulk per patient for the first nine months of the present fiscal year was equal to the amount which was paid out during the best year which they ever had in that period of six or seven years. Excluding the year 1893 from consideration, for the years 1889 to 1892, inclusive, the cost of food supplies per patient was only about 15 cents per day. This was a matter of record, and he felt that it was due to his associates and himself that this matter should be stated explicitly and placed upon record. He wanted to say, further, that he should be very much opposed to having the New York institutions go back to the county system, because he had been for many years a witness of what that system represented. Greater New York contains nearly one-half of the population of the state and one-half of the insane population. He believed that Governor Black is entirely right when he pointed out in his message practically that it had been an outrage that half of the insane in the state should be given a high standard of care and treatment, while the other half were neglected. The people of Greater New York pay their share of the taxes—and in this connection he desired to say that they did not pay any more than their share—in his judgment they did not pay what they ought to pay. It was true that the city of New York contained the greater portion of the wealth of the state—an undue proportion perhaps—

Monthly Conferences

and that the contention that they paid an undue proportion of tax in his judgment was entirely erroneous. The way that the state tax operated was well illustrated in the case of the school taxes. The interior counties of the state received for school purposes, many times the amount they raised by tax for that purpose, as by far the greater portion of the money raised by tax for school purposes was obtained from the counties which contained large centres of population. Previous to the assumption by the state of the care of the New York city institutions it had been an outrage that the city of New York had had to pay for the maintenance of separate institutions outside of New York from which they received no benefit whatever.

Dr. Dent said that he did not wish to convey the impression that either Dr. Macdonald or himself desired to return to the city administration; in fact he was sure that Dr. Macdonald did not and that he himself had no such wish. It was true that there had been many improvements under the state system. Taking it all in all that system was a decided improvement upon the city, that fact he would acknowledge, and if he had impressed the conference otherwise in what he had said he wished to disabuse their minds of it.

Dr. Hurd from the committee on uniform rules and regulations reported progress, and the committee was continued.

Dr. Blumer, from the committee to memorialize the State Civil Service Commission, said that at the last conference action on the report of the committee had been deferred, but through some misunderstanding the memorial had been presented to the Civil Service Commission and he had been informed that it had been acted upon at a meeting held by that board and a resolution had been adopted requiring all candidates for the position of assistant physician or interne in the state service should possess a state license as a condition precedent to examination for such a position, and the secretary had been directed also by the Commission to inform him that the other matters referred to in the memorial were already a matter of rule.

Dr. Wagner, from the committee appointed to consider the sub-

Monthly Conferences

ject of some designation in the way of a badge or button for graduates of training schools, requested further time, and the same was granted.

Dr. Macy submitted the following report of the committee of stewards in the matter of joint purchase of supplies:

STATE OF NEW YORK—WILLIARD STATE HOSPITAL,

July 21, 1898.

To the Conference of Superintendents with the State Commission in Lunacy:

Gentlemen.—In accordance with a resolution passed by you at the June conference appointing M. J. Gilbert, W. S. Remington and H. E. Cole, committee to consider the matter of additional joint purchase of supplies and to report to the conference of superintendents with the State Commission in Lunacy at the July meeting, we therefore respectfully report that we have considered the resolution and would suggest that in addition to the articles already provided for under joint contracts the following articles might be added: Culinary starch, cream tartar, saleratus, canned peas, canned corn, canned tomatoes, canned succotash, butter, cheese, vinegar, alkali, sal soda, laundry starch, bluing, commercial fertilizer, knives, forks, table spoons, tea spoons, dessert spoons, blankets, rubber sheets.

Your committee is of the opinion that it would be advisable for the hospitals, either jointly or separately, to make a contract for butter for six months beginning with the fiscal year.

In the matter of vinegar, your committee would suggest that the gentlemen composing the committee to be appointed for the purchase of this article be requested to examine and investigate the merits of Pure Malt Vinegar before making contract, bearing in mind the probability that the price of cider vinegar for the coming year will be likely to advance owing to the short crop of apples.

Your committee would suggest that the state hospital manufacture baskets for their own use wherever practicable.

In the matter of commercial fertilizer, your committee beg to say that thus far we have heard no complaint of the quality of fertilizers purchased last spring jointly, and mixed at the different hospitals, therefore recommend that this method of procuring fertilizer be continued, it being apparent that a saving is made, and joint purchase is desirable.

Respectfully yours,

M. J. GILBERT,

W. S. REMINGTON,

Committee.

Monthly Conferences

Dr. Mabon moved that the report of the committee be accepted and that the various items be taken up for consideration. Seconded and unanimously adopted.

After a lengthy discussion of the report of the committee in detail Dr. Pilgrim moved that the items of butter and vinegar be stricken out. Carried.

The report of the committee was then accepted and adopted and the committee continued, Dr. Mabon voting in the negative.

Commissioner Brown moved that this committee in making purchases in all cases should use the words "more or less," so far as quantities were concerned. Carried.

Dr. Dewing submitted the following report of the committee on electric lamps for the ensuing two years:

STATE OF NEW YORK—LONG ISLAND STATE HOSPITAL,
KINGS PARK, *July 27, 1898.*

To the Conference:

Your committee appointed for the testing and purchase of electric lamps desires to make the following report:

On May 14th specifications proposed by the state electric engineer were sent to all leading firms manufacturing incandescent lamps. Fourteen of these firms forwarded samples called for, to be tested at the Utica State Hospital.

Six lamps of each set of samples were run through a life test. Careful readings of candle power, amperage and voltage were taken at stated intervals. The standards of each manufacture were also tested. The detailed results of the test are given in a report submitted by Mr. Frost. His conclusions are as follows:

It is evident that the specifications are liable at any time to be violated, therefore the testing instrument is to be kept always in condition at the Utica State Hospital, so that samples of shipments may be tested at any time.

The following lamps only are deserving of consideration and are placed in order according to the merit of the samples tested:

- 1st. Columbia.
- 2d. General Electric Co.
- 3d. Edison Jr.

The Columbia samples fulfilled all requirements and gave excellent results.

The sample of the General Electric Co. gave excellent results, but as they sent 4 Watt lamps instead of 3.5 Watt lamps, the

Monthly Conferences

results are not to be placed on comparative basis with lamps which conformed to the specifications.

Aside from being un-uniform in early life, the Edison Jr. gave excellent results.

Inasmuch as Mr. Frost finds that only three makes of lamps as mentioned are deserving of consideration, your committee has not considered prices quoted on other brands of lamps. Taking the three varieties, Columbia, General Electric and Edison Jr., we find that with regard to the first point in the specifications that whereas the Edison Jr. will comply by allowing the contract to extend over a two years' period, the other two firms limit the period to one year, thus failing to comply with the specifications in this point.

2d. The Edison Jr. complies exactly with the specifications in that they will indefinitely increase their shipment in accordance with the terms of the specifications, whereas, the General Electric and Columbia companies limit their increase to 25 per cent in one year.

3d. All comply with the 3d point in the specifications.

4th. All comply with the 4th point in the specifications.

The prices quoted are as follows:

	Columbia F. O. B. New York.	Edison, Jr. F. O. B. Sheldy, O.	Gen'l Elec. F. O. B. Harrison, N. J.
1 C. P. standard base night lamp..	.17	.45	.40
6 C. P. standard base night lamp..	.17	.45	.17
10 C. P. incandescent lamp.....	.17	.16	.17
16 C. P. incandescent lamp.....	.17	.16	.17
20 C. P. incandescent lamp.....	.17	.16	.17
25 C. P. incandescent lamp.....	.17	.20	.17
32 C. P. incandescent lamp.....	.26	.26	.26
50 C. P. incandescent lamp.....	.43	.40	.43
100 C. P. incandescent lamp.....	.85	1.00	.85
	=====	=====	=====

Prices on 20, 25, 40 and 50 C. P. street series incandescent lamps are as follows:

	Columbia F. O. B. New York.	Edison, Jr. F. O. B. Sheldy, O.	Gen'l Elec. F. O. B. Harrison, N. J
20 C. P.....	.32	No quotation.	.50
25 C. P.....	.52	No quotation.	.50
40 C. P.....	.60	No quotation.	.60
50 C. P.....	.68	No quotation.	.68

On frosted, artificially colored and naturally colored lamps, there is considerable irregularity in the quotations, but a careful

Monthly Conferences

comparison shows that in general and on the average, the prices quoted by the Edison Jr. Co. are the lowest.

All the above prices are quoted on Edison and Westinghouse bases.

On the T. H. base, all quote one cent per lamp additional.

None of these bidders will allow a rebate for burned out lamps.

It has, we think, been shown that—

First. The price quoted by the Edison Jr. Co. are lower than those quoted by either of the other two companies, but, in connection with the prices quoted, freight should be taken into consideration, the Edison Jr. being put on board at Sheldy, Ohio, the Columbia at New York city, and the General Electric at Harrison, N. J.

The additional freight on the Edison Jr. lamp, however, would not, in the judgment of your committee, amount to the difference in cost of the lamps.

Second. Neither the General Electric Co. nor the Columbia Co. comply with the points 1st and 2d of the specifications. The Edison Jr. Co. complies with these points.

Third. In Mr. Frost's statement of the comparative merit of these lamps, he places Columbia first, General Electric second, and Edison Jr. third, but he goes on to state that aside from being un-uniform in early life, the Edison Jr. gives excellent results.

Your committee would submit these conclusions to the conference and would respectfully ask that the conference, after having given them consideration, instruct your committee with regard to placing of contract.

Respectfully submitted,

CHAS. W. PILGRIM,

O. M. DEWING,

Committee.

After discussing the report in detail Dr. Mabon moved that the committee be directed to confer with State Electrician Frost and be given power to act in the matter of entering into contract. Seconded and adopted.

Commissioner Brown read to the conference a communication from Prof. W. O. Atwater, of Wesleyan University, Middletown, Conn., inclosing a statement of results of analyses of specimens of bread submitted to him for examination, as follows:

(1) Bread from an Albany bakery (made presumably of 75 per cent. ordinary wheat flour with an admixture of 25 per cent. of corn meal).

Monthly Conferences

- (2) Bread from the Rochester State Hospital (made presumably of 75 per cent. of ordinary wheat flour with admixture of 25 per cent. of white corn meal).
- (3) Average of analyses of 140 specimens of bread from ordinary wheat flour.
- (4) Average of analyses of two specimens of bread from corn meal.

CHEMICAL LABORATORY, WESLEYAN UNIVERSITY,
MIDDLETOWN, CONN., July 19, 1898.

Mr. T. E. McGARR, *Secretary State Commission in Lunacy, Albany, N. Y.:*

Dear Sir.—I enclose herewith statement of results of analyses of specimens of mixed bread received from yourself and from Mr. Brown. You will see that the results give both specimens a high nutritive value.

While we are hardly competent to pronounce upon the quality of the bread from the bakery standpoint, the decided impression of my assistants as well as myself is that both loaves were very satisfactory in respect to both appearance and flavor. They were not as fine, of course, as bread made from the most expensive wheat flour, but for practical purposes I cannot see why they should not be just as good.

Will you kindly convey this information to Mr. Brown? I send a copy of this letter and of the report of the analysis to Dr. Wise in New York, presuming that if he is in Albany you will show him the originals.

Very truly yours,
W. O. ATWATER.

The following are the results of analyses of specimens of mixed wheat and corn meal bread, from the New York State Lunacy Commission and of similar analyses of ordinary bread from wheat and corn.

	No. 1 Albany Mixed. per cent.	No. 2 Rochester Mixed. per. cent.	No. 3 Average Wheat. per cent.	No. 4 Average Corn Meal. per cent.
Water	32.2	29.7	35.1	37.9
Protein	9.7	9.4	9.4	8.5
Fat	2.0	2.7	1.2	2.7
Carbohydrates	54.8	56.8	53.2	47.3
Ash	1.3	1.4	1.1	3.6
	100.0	100.0	100.0	100.0

Monthly Conferences

No. 1 was received from T. E. McGarr, secretary of the New York State Commission in Lunacy per letter of June 4th; No. 2 from Goodwin Brown, Esq., Commissioner in Lunacy, per letter of June 21st from the Rochester State Hospital. Nos. 3 and 4 are averages of analyses of specimens of bread made in different parts of the United States. The quantities of nutrients are rather larger in these specimens of mixed wheat and corn bread than in the average wheat bread. Even the protein, the most important constituent, is as large in No. 1 and larger in No. 2 than in the average wheat bread. One reason for the large proportion of nutrients in the mixed bread is to be found in the rather small proportions of water. It may be that the loaves had dried somewhat more between the time of baking and analysis than was the case with wheat bread analyzed. But both the flour and the corn meal in the mixed breads must have had good proportions of protein to make bread so rich in that ingredient.

There is no reason to assume any considerable difference in the digestibility between the mixed and the wheat or corn bread.

On the whole these figures are very favorable for the nutritive value of the mixed breads.

W. O. ATWATER.

Commissioner Brown further asked the experience of the superintendents in regard to the use of an admixture of white corn flower in connection with the ordinary wheat flower.

Dr. Blumer said that the experience at Utica had been satisfactory.

Dr. Hurd stated that an admixture of 20 per cent. had shown satisfactory results at Buffalo.

Mr. Leonard reported good results.

Dr. Dent stated that the scheme was being carried out at the male department and the patients ate the bread.

Dr. Dewing said that during very warm weather it had seemed to sour and they had had to reduce the proportion of corn flour, but the bread was all right until the hot weather of the preceding few weeks.

Commissioner Brown said that at the St. Lawrence State Hospital less trouble had been found in this regard with the corn flour than in the old way, and that he felt satisfied that the trouble lay with the bakers.

Monthly Conferences

Dr. Howard thought that with 25 per cent. it was darker and drier, and he thought a smaller percentage would be better.

Dr. Mabon said that it did not dry so quickly, and he was free to confess that the bread was better than any bread they had ever had; he could say this without any qualification and that the general report of employees and patients was in favor of it.

Mr. Leonard suggested that there should be care exercised about the meal, that the souring possibly took place before the meal was cooked.

It seemed to be the general consensus of opinion that an admixture of 25 per cent. of corn flour was more economical and preferable in every way to the old method of baking bread entirely of wheat flour.

Commissioner Brown said he had been informed by Mr. Crummey that care should be exercised in the purchase of this flour because there were a number of grades. Mr. Crummey had also said that commercial bakers had formerly been in the habit of mixing the flower wet, but that the modern idea was to mix it dry.

Commissioner Brown stated that he wished to again refer to the advisability of extending the use of spray-baths, not only for the sake of cleanliness, but for the reason of the great economy in the consumption of coal which this method of bathing afforded.

Dr. Pilgrim said that he wished to say that they were now bathing patients twice a week, and he thought it was quite an improvement on the old system.

Commissioner Brown said that he wished to congratulate Dr. Pilgrim and that he found that this reform was gradually spreading. Dr. Hurd had reported to him that the results had been very noticeable and beneficial. He had also been informed that at St. Lawrence the method prevailed almost entirely.

Commissioner Brown stated that through the courtesy of the proprietors of the Manhattan Hotel, New York city, he had been permitted to observe their method of making coffee there, and found that it was done entirely by filtration. He had figured

Monthly Conferences

out and found that the hospitals are using as much coffee per capita as the Manhattan Hotel. He had talked with the steward of that hotel about the use of Santos coffee, and he had informed him that this was an excellent coffee, and was not substantially different from the coffee that they bought.

With regard to butter, he found that they purchased fancy brand creamery butter for 24c. per pound, carefully stamped with the name of the manufacturer. The butter is divided into pats, each pat containing 0.66 of an ounce, and that it is very rare that more than one of these pats is called for at a meal. They serve butter at two meals a day and he was glad to see that the state hospitals were following the prevailing fashion.

Commissioner Brown said that he desired to call the attention of the superintendents to the fact that it had been shown that in many instances patients were admitted without new clothing as required by the statute, and that careful attention should be given to this matter

Dr. Pilgrim made to the conference the following statement of the experience of the Hudson River State Hospital in the matter of furnishing crash suits for certain men patients.

STATE OF NEW YORK—HUDSON RIVER STATE HOSPITAL.

POUGHKEEPSIE, N. Y., *July 26, 1898.*

Gentlemen.—In the matter of crash suits for men patients, recommended by Commissioner Brown, I beg to submit the following statement:

We purchased from Jas. H. Dunham & Co. a sample of two pieces "Alberton" linen suiting, 27 inches wide at 9½c. per yard. Also one piece from John Wanamaker, 36 inches wide, at 16c. per yard.

After several experiments we think the 27-inch goods purchased from Jas. H. Dunham & Co. are the best we can buy for the purpose. It is more economical to use and cuts to better advantage.

A yard of this goods was washed and it shrunk about one-half inch in width and not at all in length. A seven yard piece of the 36-inch goods purchased from John Wanamaker was washed and shrunk one inch in width and six inches in length.

We have made up about fifteen suits in all and they are being

Monthly Conferences

worn every day by patients and are very satisfactory. The appearance is much neater for summer than the woolen goods, they are very much cooler, and more easily washed than the heavier clothing.

I have sent you by express two sample suits. Suit marked No. 1 is made from the 27-inch goods and was washed after being made up. Suit No. 2 was made from the 36-inch goods and was washed before being made up. The linen suits are very much cheaper, as will be seen from the following comparison:

Material used for making crash suit:

The buttons for these suits were purchased in small quantities in the city of Poughkeepsie. If they were bought in New York in some large jobbing house, the price would be very much less. This, of course, would reduce the cost a few cents.

Seven yards of goods at, per yard.....	9½c.
One-third dozen coat buttons, per dozen.....	18 c.
One-half dozen vest buttons, per dozen.....	16 c.
One dozen pants buttons, per gross.....	80 c.
One yard muslin (when trousers are lined).....	5 c.
Thread	6 c.
Making the total cost of material about.....	98 c.

One person can make one suit in one day.

Material for woolen suit:

Three and one-half yards 6.4 suiting, per yard.....	75 c.
One and three-quarters yard Italian cloth (lining) per yard	14 c.
One and one-half yard black silesia, per yard.....	8½c.
One and one-half yard slate silesia, per yard.....	8½c.
Two yards coat canvas, per yard.....	2½c.
One yard muslin, per yard.....	5 c.
Thread and buttons.....	13 c.
Making the total cost of material.....	\$3.38

One person can make one suit in one day.

Respectfully submitted,

CHAS. W. PILGRIM.

Referring to the matter of full cream cheese, Commissioner Brown stated that the hospitals should purchase only such cheese as bore the stamp of the State Agricultural Experiment Station.

Commissioner Brown read to the conference the following report from the New York Agricultural Experiment Station, Geneva, in regard to the matter of utilizing bones for fertilizing purposes. Mr. Brown stated that Commissioner Parkhurst himself had given some attention to this subject and had found that

Monthly Conferences

several of the state hospitals had vast quantities of bone fertilizer going to waste, and that the Commission would be very glad to allow a bone-mill to the hospitals for the purpose of grinding bones for fertilizer.

NEW YORK AGRICULTURAL EXPERIMENT STATION, GENEVA, N. Y.

July 25th, 1898.

Hon. Goodwin Brown, Smyrna, N. Y.:

Dear Sir—Your letter of July 25th is before me. There are several ways of utilizing bones for fertilizing purposes. The most efficient method is to grind them and then submit them to the action of oil of vitriol. By this method they are reduced to what is called in the market, dissolved bone, the phosphoric acid being largely made soluble. If the bones are to be used in the production of garden crops and hold crops, this is by far the most desirable method. The economy of doing this will depend somewhat on the quantity of the bones available.

Another method is to grind the bones finely and use them in the undissolved condition. Ground bone, especially raw bone, is somewhat slow in its effect and is more desirable as an application to fruit and in seeding down grass lands. Bone is more efficiently utilized by the latter method if it is previously steamed, especially if the steaming can be done under pressure. The bones grind more finely and the phosphoric acid appears more readily available than that of raw bone. The steaming takes out a large proportion of the nitrogenous constituents of the bone in the form of gelatin, and as a source of nitrogen they are, therefore, less valuable. No phosphoric acid is lost by this method.

Another method somewhat in vogue is to break bones up into a somewhat coarse condition and submit them to the action of ashes which are thoroughly wet. Wooden tanks, barrels, or hogsheads, may be filled with alternating layers of ashes and bones, which should be thoroughly wet. In this way the bones become thoroughly softened and may be finely pulverized but are not rendered available as is the case where they are treated with oil of vitriol.

The manufacture of dissolved bone by the use of the acid to be most thoroughly done would require a mill for grinding and proper wooden tanks in which to submit the bones to the action of the acid. This would be less expensive machinery than would be required for steaming and grinding and you would have a more immediately available and efficient material. If you

Monthly Conferences

decide to attempt the manufacture of dissolved bone, I shall be glad to give you directions as to the method of procedure.

Yours truly,

W. H. JORDAN,
Director.

After a considerable discussion of the matter of bi-monthly estimates, the superintendents were directed to notify the hospital treasurers to make up treasurer's reports monthly, covering the items purchased within the month.

Commissioner Brown called attention to the desirability of the hospitals purchasing patent potato peelers. Dr. Dewing said that one of these peelers had been in use for some time at the Long Island State Hospital and had been doing very good work; and there was very little waste.

The matter of the use of wooden washers in laundries in comparison with metallic washers was discussed at considerable length.

Dr. Blumer brought up for discussion cases of pensioners in the state hospitals who were receiving large pensions, in many instances as high as \$72 per month, and stated that in his opinion the reimbursing rate of \$3.75 per week, which was received for the care and maintenance of these patients, was entirely inadequate, and it was almost the universal opinion of the superintendents present that at least \$10 per week should be charged cases of this kind.

Dr. Macy submitted the following report as committee to select sizes and prepare a uniform set of envelopes for the use of the hospitals.

STATE OF NEW YORK—WILLARD STATE HOSPITAL

July 23, 1898.

To the Conference of Superintendents of State Hospitals with the Commission in Lunacy:

Gentlemen—At the last meeting of your conference, you appointed me as a committee to select sizes and prepare a uniform set of envelopes for the use of the hospitals, in the place of Dr. Blumer, who was appointed on that committee at the meet-

Monthly Conferences

ing held May 31st, 1898. While I desire to follow the wishes of your conference as closely as possible, I have felt that this task is rather a delicate one, and would have preferred that you should have continued Dr. Blumer in his work.

As my duties seemed to be confined to the selection and preparing a uniform set of envelopes, I have interpreted this as meaning, that your conference desires particularly, to have a set of envelopes selected regarding size rather than as to the printing that should appear upon them, and I can readily understand that the latter might be quite different in the different hospitals, particularly for the reason that in some cases it is very necessary to have the post-office box number placed upon an envelope, or the post-office station, while in other instances this would not be at all necessary. I would therefore give in outline, a statement regarding the kind and use of envelopes I found in the correspondence sent me from the different hospitals, and then under each heading, will give what I found desirable or necessary in the use of these envelopes in the past.

I.—Heavy blue envelopes, linen-lined, or made of heavy paper of good quality, and used because of their durability or opaqueness.

In this class, I find three sizes used for important documents, such as estimates, quarterly reports, letters, etc., etc., in transmission to the Commission in Lunacy. These all seem necessary; they are as follows:

No. 1, size $13\frac{1}{2}$ in. x $9\frac{1}{2}$ in.

No. 2, size 12 in. x 9 in.

No. 3, size 11 in. x $8\frac{1}{2}$ in.

In addition to the above, I also found among the different hospitals that envelopes of blue paper of good quality were used where it was found necessary to have an envelope that could not be readily seen through, etc., of the following sizes:

Nos. 11, 10, $6\frac{1}{2}$ and 6.

The Lunacy Commission use a special linen-lined envelope of the No. $6\frac{1}{2}$ size, but I do not find this used by any of the institutions.

As far as the printing is concerned, all of these envelopes have the official heading on the upper left hand corner, except those used by the superintendents to send as enclosures and the addressed return envelopes. On these latter, the envelopes simply bear the name and address of the superintendent. In some cases, I also observe that on the left hand side of the envelope, special instructions are inserted in order that enclosures may be returned direct to the superintendent, to prevent their coming in, or being taken care of, in the general mail. The addressed envelopes of this kind are as follows: Those addressed to

Monthly Conferences

State Commission in Lunacy.

Secretary of the Board of Managers.

Treasurer of each hospital.

Attorney of each hospital.

Steward of each hospital.

Superintendents' return envelopes.

To other superintendents.

The necessity for envelopes for these purposes seems to be apparent, though the use of some of them is limited, and they are interchangeable with those of differently colored paper.

II.—Envelopes with office headings.

This would include all envelopes to be directed with a pen, or by typewriter, and whether bearing the official title of the institution and designation, as to the use of the envelope, in the upper left hand corner, or marked to be returned to post-office box, etc., or marked in addition with instructions to be returned to the superintendent, or other officials from whose office those envelopes are sent. These envelopes are as follows:

Those used by the State Commission in Lunacy.

Board of Managers, (including the President and Secretary).

Superintendents' envelopes for official correspondence of each hospital.

Treasurers' envelopes.

Envelopes for the attorney of each hospital.

Envelopes for the steward's department.

Owing to the fact that enclosures, both large and small, have to be sent from the hospitals, it would be necessary to have the following sizes:

Nos. 12, 11, 10, 6½ and 6.

III.—Brown paper envelopes.

This includes envelopes made of heavy brown paper, and envelopes made of a very much lighter and cheaper paper. The latter envelopes are used for sending enclosures when they are not important and for use among the offices and wards, where the use of a good many of the better quality might prove expensive. The sizes of the envelopes that I have found in use at the various hospitals, with their use, is given as follows:

No.	Size.	Description.	Use.
1	10 x 12	Doc. clasp envel.	Used for sending papers to S. C. L.
1	10 x 12	Doc. mucl. envel.	" " " "
2	11½ x 9½	Doc. clasp and mucl. envel.	" " " "
3	11 x 9½	Doc. mucl. envel.	" " " "
4	11 x 5½	Doc. Dunham's comb. mail envel.	Used for misc. enclosures.
5	10 x 6½	Clasp envel.	Used for annual reports
6	7½ x 5	Clasp envel.	Used for encl. property of patients.
7	7½ x 4½	Comb mail	Used for misc. papers.
8	5½ x 3½	Mucl. envel.	Used for misc. encl. for preserv'n.
9	4½ x 2½	Mucl. envel.	Used by Treas. for pay envelopes.

Monthly Conferences

It will be observed that among the above envelopes, there are only three for mailing miscellaneous documents. All these envelopes, except those of heavy paper, are very cheap.

Besides the envelopes given above, I find that except for special purposes, such as where there is a necessity for very strong envelopes, they would take the place of both paper linen-lined envelopes, for sending important enclosures, (and where the use of such an envelope would be cheaper) and for miscellaneous papers where only a very cheap envelope is required, in at least two weights of paper referred to—a very heavy paper, and a very light and cheap paper, all of the following sizes:

Nos. 12, 11, 10, 6½ and 6.

These would include Nos. 10 to 15 inclusive.

No 16 document mail envelopes.

Some of the institutions seem to have use for this envelope; the common size being 9½ in. x 4 in. and 10½ in. x 4½ in. While these envelopes may be required to have in stock, it does not seem apparent that any one institution will be likely to use but very few of them. At this point, I would draw attention to the fact, that in the use of cheap envelopes, some of the hospitals differ. Some of them have a preference as to color, and would suggest, particularly as there is no difference in the cost of these envelopes, that this matter be not interfered with. Besides the brown and white envelopes, referred to above, envelopes are used by the superintendents, treasurers, etc., of blue, azure, and yellow papers. It might seem advisable to allow some preference in the use of envelopes of different colors, just as it might be desirable to allow different hospitals to use different colored typewriter ribbons. All of the above envelopes are required at times.

IV.—Special envelopes.

The Middletown State Hospital asks for a small envelope, that is 3½ x 2 in. for dispensing powders. This seems a very convenient size for this purpose, and presume it is needed by Dr. Talcott.

The above mentioned sizes, include all the regular envelopes used by the hospitals, and they seem, except in the case of the miscellaneous brown paper envelopes used for forwarding papers, etc., and, except in the cases of the regular envelopes for forwarding enclosures to the State Commission in Lunacy, to be uniformly of the sizes mentioned; namely:

Nos. 12, 11, 10, 9, 6½ and 6.

The necessity for having three or four sizes of the larger envelopes is because of the various sizes of the enclosures, not only sent out from the hospitals, but received in the United States

Monthly Conferences

mail in the general correspondence, and required to be forwarded to others, and, in the case of the use of small envelopes, the No. 6 envelope is required as an enclosure in the No. 6½.

V.—Plain envelopes for common use and patients' letters.

In addition to the envelopes mentioned, I find absolutely plain envelopes of the sizes mentioned above are used to a comparatively limited extent for a variety of uses, particularly such as sorting and arranging papers in the offices temporarily, etc., and for patients' correspondence, including the size mentioned as well as some No. 5 envelopes, which are used by a few of the hospitals. I would suggest that these envelopes be supplied, as needed, of this size, but would think that if it meets with the approval of the superintendents heretofore using them, that the No. 6 envelope could be used in place of No. 5 envelope.

VI.—Stamped envelopes.

The only other envelopes that I find used are the stamped envelopes, and the addressed envelopes. The stamped envelopes are obtained from the United State Postal authorities. Among the stamped envelopes I find a limited number of envelopes are used of the sizes Nos. 12, 11 and 10. These usually have the return stamp of the hospital, or, in some cases, the post-office box number, etc. The No. 6½ stamped envelopes are used very largely, and I do not doubt economically in the official correspondence of the hospitals. The above envelopes include those with headings used by the

State Commission in Lunacy.

The managers.

Superintendent's official correspondence.

Treasurer of each hospital.

Attorney of each hospital.

Steward's department.

Those used by the state hospitals bulletin.

Some of these envelopes used by the hospitals, more particularly the No. 6½, are marked on the left-hand side of the envelope, to be returned direct to the superintendent, the reason being that it is desired to have them come to him personally, when received through the mail.

VII.—Addressed envelopes.

These include sizes Nos. 1, 2 and 3 of the first list of the blue envelopes for forwarding enclosures to the State Commission in Lunacy and Nos. 11, 10, 6½ and 6, directed as follows:

The State Commission in Lunacy.

The president of the board of managers.

Secretary of the board of managers.

Treasurer of each hospital.

Monthly Conferences

Attorney of each hospital.

The superintendents of each hospital using the envelope as return envelope.

To other superintendents.

To the steward of each hospital.

These envelopes are generally marked in the upper left-hand corner, with the title and address of the hospital, and on the left-hand side with instructions, when necessary, as to the return, etc., and, in cases where envelopes are sent out by the superintendent, treasurer and attorney, these particulars are omitted, because the name and address is sufficient.

There are also used for detained patients' letters, for forwarding to the State Commission in Lunacy, envelopes Nos. 11, 10 and 6.

After considering the various classes of envelopes mentioned in the foregoing list, together with the uses of such envelopes, I find that envelopes of each of the various classes referred to are required in the state hospital service, and after weighing the matter carefully as to how extensively these envelopes might be used, I find that it is better to recommend to your conference that the full list given above should be adopted. I make this recommendation, because outside of the few envelopes, such as the No. 11, 10, 6½ and 6 sizes, and envelopes for the transmission of matter to the State Commission in Lunacy, the use of the remainder does not require any considerable stock to be kept on hand at any hospital, and too, as far as the colors are concerned the envelopes are interchangeable, the use depending on whether an envelope of good quality or a very cheap envelope is required, etc., and I think it would be economical in the long run to allow a rather large variety of these envelopes, where the necessity for an envelope of good quality, or a very cheap envelope is considered, so that full consideration of this point may be given as far as possible. Awaiting any further instructions that your conference may see fit to give me in this matter, I am

Respectfully,

WM. AUSTIN MACY.

On motion of Dr. Blumer the report was accepted.

Dr. Wagner moved that the whole matter of envelopes be referred to Drs. Blumer and Macy as a special committee, to select samples and supply each hospital with an outfit of the same for examination and suggestions. Seconded by Dr. Pilgrim.

Dr. Howard moved as an amendment, that the committee be

Monthly Conferences

authorized to select these envelopes and furnish each hospital with a stock and bill accordingly.

Dr. Wagner accepted the amendment and the motion was unanimously adopted.

On motion of Mr. Hurd, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

**STATE HOSPITALS—OCTOBER AND NOVEMBER
ESTIMATES—1898**

Abstract of minutes and resolutions adopted at a meeting of the representatives of state hospitals and the Commission, held September 29, 1898.

Present.—Commissioners Wise, Brown and Parkhurst. Utica State Hospital, G. Alder Blumer, M. D., medical superintendent; Willard State Hospital, M. J. Gilbert, steward; Hudson River State Hospital, Chas. W. Pilgrim, M. D., medical superintendent; Middletown State Homeopathic Hospital, Selden H. Talcott, M. D., medical superintendent; Buffalo State Hospital, Arthur W. Hurd, M. D., medical superintendent; Binghamton State Hospital, Charles G. Wagner, M. D., medical superintendent; St. Lawrence State Hospital, William Mabon, M. D., medical superintendent; Rochester State Hospital, E. H. Howard, M. D., medical superintendent; Long Island State Hospital, O. M. Dewing, M. D., general superintendent; Manhattan State Hospital, E. C. Dent, M. D., medical superintendent, female department; Collins State Homeopathic Hospital, D. H. Arthur, M. D. medical superintendent. Stewards Remington and Cole were also present.

Commissioner Wise, chairman.

Dr. Hurd, from the committee on uniform rules, stated that a proposed series of rules had been prepared, but he would suggest that before action was taken upon them by the conference that a copy be sent to each superintendent for consideration.

Dr. Talcott moved that Dr. Hurd's request be granted, and that a copy be sent to each superintendent. Carried unanimously.

Monthly Conferences

The chairman stated that he had before him a report submitted by a committee of stewards on the 18th of February last in the matter of accounting for farm and garden products. All knew that the reports of the several institutions each year regarding this matter had not been at all uniform and this committee had reported in favor of a form of accounting which he thought would remedy this fully.

The report was as follows:

February 18, 1898.

REPORT OF COMMITTEE OF STEWARDS ON SYSTEM OF ACCOUNTING
FOR FARM AND GARDEN PRODUCTS.

Your committee would respectfully report that in making the annual accounting of farm and garden products there should be a debit and credit account, as follows:

FARM.

Credit.

Apples, 469 bushels at 35 cents.....	\$164 15
Beef, 6,873 pounds at 6.2 cents.....	426 13
Beets, 3,225 bushels at 30 cents.....	967 50
Buckwheat, 120 bushels at 50 cents.....	60 00
Calves, 16.....	14 00
Carrots, 208 bushels at 35 cents.....	72 80
Cider, 313 gallons at 4 cents.....	12 52
Corn fodder, 225 bushels at 25 cents.....	56 25
Eggs, 407 dozens at 16 cents.....	65 12
Ensilage, 800 tons at \$3.....	2,400 00
Ham, 6,391 pounds at 10 cents.....	639 10
Hay, 133 tons at \$12.....	1,596 00
Hides, 3,232.....	119 66
Lamb, 1	5 00
Lamb, 1,231 pounds at 10 cents.....	123 10
Lard, 4,818 pounds at 5 cents.....	240 90
Milk, 155,881 quarts at 2 cents and 6 mills.....	4,052 91
Mutton, 1,300 pounds at 6 cents.....	78 00
Oats, 2,276 bushels at 30 cents.....	682 80
Pears, 26 bushels at 50 cents.....	13 00
Pelts, 44	14 80
Pork, 30,623 pounds at 6 cents and 2 mills.....	1,898 63
Pumpkins, 3 loads at \$1.50.....	4 50
Sausage, 1,593 pounds at 9 cents.....	143 37

Monthly Conferences

Shoulders, 5,817 pounds at 8 cents.....	\$465 36
Straw, 97 tons at \$6.....	582 00
Tallow, 5,090 pounds.....	168 24
Turnips, 1,352 bushels at 30 cents.....	405 60
Wool, 327 pounds.....	42 51
	<hr/>
	\$
	<hr/> <hr/>

All other products, sales and rents properly credited to farm and grounds.

GARDEN.

Beans, 136 bushels at 90 cents.....	\$122 40
Beans, seed, 1 bushel at \$2.....	2 00
Beets, 660 bushels at 40 cents.....	264 00
Cabbage, 6,218 heads at 3 cents.....	186 54
Carrots, 89 bushels at 35 cents.....	31 15
Cauliflower, 280 at 5 cents.....	14 00
Celery, 5,489 at 5 cents.....	274 45
Cress, 179 at 1 cent.....	1 79
Cucumbers, 7,956 at 2 cents.....	159 12
Lettuce, 15,741 at 2 cents.....	314 82
Muskmellons, 292 at 2 cents.....	5 84
Onions, 559 bushels at 50 cents.....	279 50
Onions, 8,744 bunches at 3 cents.....	262 32
Parsley, 1,057 at 1 cent.....	10 57
Parsnips, 224 bushels at 35 cents.....	78 40
Peas, 356 bushels at \$1.....	356 00
Peppers, 5 bushels at \$1.....	5 00
Pickels, 30 barrels at \$9.50.....	285 00
Pieplant, 3,711 at 4 cents.....	148 44
Radishes, 9,685 at 5 cents.....	484 25
Spinach, 235 at 50 cents.....	117 50
Squash, 28,184 pounds at 2 cents.....	563 68
Tomatoes, 303 bushels at 75 cents.....	227 25
Turnips, 256 bushels at 35 cents.....	89 60
	<hr/>
	\$.....
	<hr/> <hr/>

Debit.

Amount charged farm and grounds as per treasurer's account	\$.....
Amount of farm wages.....	.....

Monthly Conferences

All articles of produce that have been used as food for cows, hogs, sheep and fowls.....	.....
Net profit to balance.....	.....
	<hr/>
	\$.....
	<hr/>

Respectfully submitted,
M. J. GILBERT,
EDWIN EVANS,
W. S. REMINGTON,
Committee.

Dr. Mabon moved that the report of the stewards be adopted, and that the superintendents in making out their annual report should deal somewhat with the matter of farm and grounds, making their explanations as to the expenses in the body of the report.

Carried unanimously.

Commissioner Brown suggested that the explanations be also made in form 780, statement of expenditures.

Dr. Mabon accepted this as an amendment to his motion, and it was adopted unanimously.

Dr. Pilgrim moved that the chair appoint a committee of three stewards to determine the prices of articles of produce that are to be accounted for uniformly in the reports of farm and garden products of the several hospitals for the past year.

The chairman appointed as such committee Stewards Wheeler, Gillespie and Gilbert.

The chairman submitted to the conference the report of the committee of stewards appointed to make contracts for six months' supply of staple articles.

Dr. Talcott moved that the report be accepted. Seconded and adopted.

Dr. Mabon moved that the chairman of the committee be appointed the representative of the managers of the different state hospitals to make contracts for six months' purchase of supplies, and authorized to enter into contract with the lowest bidders.

Monthly Conferences

Dr. Pilgrim moved as an amendment that the whole committee be authorized to sign the contracts instead of one.

The amendment was accepted by Dr. Mabon, and the motion as amended was adopted by the following vote:

Ayes: Drs. Talcott, Pilgrim, Mabon, Howard, Arthur, Wagner, Dewing, Hurd, Dent, Blumer, Steward Gilbert.

Noes: None.

Dr. Wagner, from the committee appointed to consider the subject of some designation in the way of a badge or button for graduates of training schools, requested further time, and the same was granted.

Dr. Dewing submitted the following report of the committee on electric lamps:

KINGS PARK, September 28, 1898.

To the Conference of Superintendents with the State Commission in Lunacy:

Gentlemen.—At the July conference your committee appointed for the testing and purchase of electric lamps made a report on the results of tests and submitted bids from the three firms whose lamps were found deserving of consideration. After a discussion of this report, your committee was instructed by the conference to award the contract for electric lamps for the coming year to the lowest bidder among the three firms whose lamps complied with the requirements of Mr. Frost, the electrical engineer.

In order to obtain a proper basis for ascertaining the lowest bidder, estimates were secured from each of the hospitals of the lamps of each candle power likely to be used during the period of the contract.

Taking these estimates as a basis, it was found that the total bid of the Edison Jr. Co. was the highest, and that the bids of the Columbia and the General Electric Co. were exactly the same, therefore, inasmuch as the General Electric has given the hospitals general satisfaction for several years, it was considered proper to award them the contract. An order was therefore given to the General Electric Co, which was accepted by them as binding for one year dating from September 1, 1898. A copy of the order is attached to this report.

O. M. DEWING,
CHAS. W. PILGRIM,
Committee.

Monthly Conferences

(Copy.)

September 1, 1898.

General Electric Co., 44 Broad St., New York City, N. Y.:

Gentlemen.—Please enter order for 25,000 or more Standard lamps to be ordered and used by the following 11 state hospitals: Utica State Hospital, Utica, N. Y.; Willard State Hospital, Willard, N. Y.; Middletown State Homeopathic Hospital, Middletown, N. Y.; Hudson River State Hospital, Poughkeepsie, N. Y.; Buffalo State Hospital, Buffalo, N. Y.; Binghamton State Hospital, Binghamton, N. Y.; St. Lawrence State Hospital, Ogdensburg, N. Y.; Rochester State Hospital, Rochester, N. Y.; Long Island State Hospital, Kings Park, N. Y.; Manhattan State Hospital, Ward's Island, N. Y.; Collins State Homeopathic Hospital, Collins, N. Y.

The above order is placed by them subject to the following understanding or agreement:

First. The above lamps will be shipped from time to time, as we may request, and will be billed only as shipped, we agreeing to take the entire number specified above within one year from the above date, payment to be made for each shipment within thirty days from date of invoice.

Second. The above future delivery order may be increased, provided that such increase is ordered and taken within one year from the date of this order, and provided, also, that no shipment of such increase be required within thirty days from date of such additional order.

Third. We understand that the net billing price of the Edison or Westinghouse Base Lamps, mentioned in this order, or additions thereto, f. o. b. New York, are as follows:

10-16-20- or 1 a. p., 17 cents net. 6 c. p., 17 cents net.

25 c. p., 17 cents net. 32 c. p., 26 cents net.

50 c. p., 43 cents net. 100 c. p., 85 cents net.

NOTE.—Frosted and artificially colored lamps of the above candle powers, 20 per cent. advance on above net prices, and 10 cents extra for naturally colored lamps of blue, green or purple, and 20 cents extra for naturally colored lamps of ruby, opal and canary.

For street series lamps: 20 and 25 c. p., 52 cents net; 40 c. p., 60 cents net; 50 c. p., 68 cents net.

Fourth. All lamps covered by this order, or additions thereto, will be billed at the above net prices, no charge for packing or package for orders of standard packages.

An additional net charge will be made for other than the standard packages of an amount equal to one cent per lamp, not exceeding 50 cents for any one package.

Monthly Conferences

Fifth. We understand that an additional net charge of one cent per lamp will be made for all lamps covered by this order, or additions thereto with T-H base.

We understand that we are to have the benefit of the above prices, even though the General Electric Co. should increase the price of lamps during the continuation of this order, and also that we are to have the benefit of any reduction in prices which the General Electric Co. may make affecting similar customers, who have, or may, place orders in like amounts.

Sixth. You further agree to furnish lamps that will not vary more than one per cent. in voltage and four per cent. in c. p. and efficiency from the ordered or required voltage, c. p. and efficiency, and further, that any or all of the state hospitals reserve the right at any time to test all or any portion of any one, or all, shipments of lamps, and if it is found that a greater variation exists, you agree to replace same free of cost to said hospitals.

Seventh. When efficiency is not stated, lamps of 3.5 Watts per candle power shall be shipped. The standards adopted by the electrical engineer for state hospitals shall be the standards in all tests, and the electrical engineer shall be the sole judge as to the fulfilment of the requirements of section six.

Eighth. Should the requirements of section six be violated more than three times by the General Electric Co., the various state hospitals shall have the right to purchase lamps outside of this order or contract, and to deduct the number of lamps so purchased from the number of lamps herein ordered.

(Signed)

O. M. DEWING,
CHAS. W. PILGRIM,

As Committee of Superintendents State Hospitals.

On motion of Dr. Talcott, the report was accepted.

Dr. Mabon stated that the contracts for crockery and glassware would expire in December.

Dr. Talcott moved that the committee on crockery and glassware be continued and authorized to renew the contracts for six months.

Carried unanimously.

Mrs. Tibbs, of Buffalo, and a representative of Patterson, Sargent & Co., of New York, were granted five minutes each in which to address the conference.

Commissioner Brown stated that in purchasing full cream cheese care should be taken to see that each cheese bore the

Monthly Conferences

state brand "full cream cheese" upon it, and not upon the box in which it was contained only.

Commissioner Brown read to the conference the following agreement uniformly entered into by the New York Condensed Milk Co., of New Berlin, N. Y., with parties furnishing milk to its establishment, in order to show the care exercised in the acceptance of milk for making condensed milk:

"BORDEN'S" N. Y. CONDENSED MILK CO.'S MILK CONTRACT.

This agreement, made this day, September 12, 1898, between the New York Condensed Milk Company, party of the first part, and each of the undersigned parties of the second part,

Witnesseth, that each of the parties of the second part for himself, and not for the others, for and in consideration of the sum of one dollar to him in hand paid and of the amounts hereinafter named to be paid to them respectively, by the party of the first part, on the fifteenth day of each month following the month of delivery, hereby agrees to sell and deliver daily, to the party of the first part, on the platform at its factory at New Berlin the number of pounds of good, pure milk produced from his or her individual dairy or dairies as specified below, at such hour as shall be named by the party of the first part.

And does also agree that the milking of his or her cows shall be done in the most cleanly manner, and that the milk shall be strained through wire cloth s. rainers of 100 meshes to an inch and thoroughly cooled immediately after it is drawn from the cow, by frequently stirring the same until the animal heat is expelled, and the temperature of said milk is reduced to 58 degrees inside of 45 minutes, by placing the can in which it is contained in a vat of cold water, the water to be of sufficient depth to come up to the height of the milk in the can, and said vat shall contain at least three times as much water as the milk to be cooled, and that the water of said vat shall be renewed daily, in sufficient quantities to prevent any fouling or smell. That in winter weather said vat shall be guarded against freezing and great care shall be used to protect the milk, during and after cooling, that it shall not become frozen, and shall not exceed 60 degrees when delivered at the factory.

And does also agree that the bath and supply of water shall be arranged to let the water flow over the top to carry off the warm water, and that the can or cans in which the milk is cooled shall

Monthly Conferences

be placed in water immediately after milking, and shall remain therein until the process of cooling shall be finished, and the time arrives for hauling same to factory; that the milk shall be transported to factory on suitable spring wagons, and that the cans shall be covered with clean canvas covers.

And does also agree that the room in which the milk is kept and cooled shall be used for no other purpose; that it shall be properly ventilated and be separate and apart from the stable in which cows, horses or any other animals are kept; that the entrance to said room shall not be through a partition or door opening directly from the stable, but from without.

And does also agree to exercise the utmost care to keep the milk and cans free from impurities of any kind soever; that the cans shall be carefully examined and thoroughly rinsed with clean water before any milk is placed therein; that the night's and morning's milk shall not be mixed, excepting the remnants of each milking, which may be placed in a can of suitable size and so designated.

And does also agree to deliver all the milk, including strip-pings, at the first delivery at the factory after it may be drawn from the cows, and not hold over any portion thereof and deliver or attempt to deliver the same at a subsequent time, and that no milk shall be delivered or offered for delivery, taken from a cow that has calved within ten days, or from a cow which will come in or calve within sixty days or from cows in an unhealthy condition.

And does also agree that when the cans are not in use, they shall be turned down on a rack with covers off.

And does also agree that if the party of the first part, its inspectors or representatives, shall have reason to suspect from any cause that water has been added, or that any part of the cream has been removed, or that the milk has not been cooled as provided, or that it has been injured by carelessness or contamination, or if it finds the cans unclean, it shall have the right to refuse such milk, or any further quantity of milk, from the party of the second part.

And does also agree that should any member of the family or servant thereof be sick with any infectious disease to immediately notify the party of the first part.

And does also agree that whenever in the judgment of the party of the first part it may be deemed necessary by them to cause an inspection of the herd or herds of the party of the second part by a veterinary or sanitary inspector, it shall be their privilege to do so; and if after careful inspection any cow

Monthly Conferences

or cows are found to be suffering with any contagious or infectious diseases or with any malady which, in the judgment of said veterinary or inspector, would of necessity render the milk unwholesome for human food, the party of the second part agrees that all such cows shall be removed from the herd, either temporarily or permanently, as in the judgment of said veterinary or inspector such removal may be necessary or conducive toward producing wholesome milk. It is agreed, however, on the part of the party of the first part that there shall be no needless sacrifice in any herd, and that sufficient evidence of the existence of noxious disease shall be produced to warrant the removal of any cow. It is furthermore agreed on the part of the party of the second part, that during the months in which the cows are stabled, special care shall be taken to remove daily all manure and everything of a foul or uncleanly nature from the stables, and that no horse or other manure shall be used for bedding, and that every precaution will be taken to prevent dust, dirt, hay seed or any foreign substance from falling into the milk pails, while in the act of milking.

And does also agree not to feed cows on turnips, wet or dry barley sprouts, brewery or distillery grains, linseed meal, glucose refuse, starch refuse, buffalo feed, ensilage, rancid oil cake, gluten meal, or any feed which will impart a disagreeable flavor to the milk, or which will not produce milk of standard richness.

And does also agree that the inspectors or representatives of the party of the first part shall, at all times, have access to and the right to examine the place for keeping the cows and for milking them, and the place for cooling the milk and keeping the pails and strainers; and that the stables and sheds for keeping the cows shall be thoroughly lighted with windows and ventilated, and whitewashed during the first month of this contract.

The party of the first part agrees to clean and steam at the factory, free of charge, the inside of all cans in which milk is brought, but the party of the second part agrees to keep his or her respective cans clean and bright on the outside. The pails and strainers employed in the dairy shall be kept thoroughly clean, and shall be scalded in boiling water and dried morning and night.

It is further understood and agreed that if any serious interruption to the trade or to the manufacture should occur, or any accident to the works of the company occur to hinder the process of manufacturing, or bottling, or if the usual facilities for transportation by any cause be interrupted, or if any restriction by legally constituted authority renders the carrying on of the manufacture, or bottling, impracticable, then the said party of the

Monthly Conferences

first part shall immediately give notice of the fact, and thereafter it shall be under no obligation to receive milk from the party of the second part under this contract, and this contract shall thereupon be considered terminated and void.

It is also understood and agreed that the party of the first part shall be under no obligation to receive any milk under this contract unless an aggregate weekly average of one hundred and twenty-five thousand pounds shall be signed by the parties of the second part.

The matter of holding religious services at the burial of public patients was brought up by Commissioner Brown, and the several superintendents stated their practice in regard thereto.

Commissioner Brown urged upon the conference the advisability of a more extended planting of small fruit and nut-bearing trees instead of shade trees pure and simple.

Commissioner Brown suggested that the Utica State Hospital prepare a number of pictures of a codfish, and send to the different hospitals, in order that they might be used as a means of identification of the genuine article.

Commissioner Brown stated that he had become convinced that it was not economical to buy any but the very best grade of eggs, and suggested that the hospitals purchase only from dealers who would guarantee each egg to be strictly fresh.

Commissioner Brown also suggested that the hospitals purchase small feed mills for the purpose of grinding their corn, oats, etc., as the ground feed purchased in the open market has been shown upon investigation to be heavily adulterated.

Commissioner Brown exhibited to the conference a knitted mattress pad manufactured by the Knitted Mattress Co., of Canton Junction, Mass., which he considered a very satisfactory substitute in many cases for the hair mattress. He stated, however, that this was his individual opinion, and was not to be considered as representing the view of the Commission.

Commissioner Brown read the following letter from Murphey & Liscomb, of Albany, N. Y., quoting prices of engine and cylinder oils.

Monthly Conferences

MURPHEY & LISCOMB,

Manufacturers of Oils and Axle Compounds, 13 Hudson Avenue.

ALBANY, N. Y., *July 26, 1898.*

Mr. T. E. MCGARR, Secretary State Commission in Lunacy:

Dear Sir.—We make quotations to you for the following oils, quality the same as you are using: Empire Engine Oil, 13c.; Mecca Cylinder Oil, 30c.; f.o.b. Albany. Any other oils you may use we should like to give quotations on.

Very truly yours,

MURPHEY & LISCOMB.

On motion of Dr. Talcott, adjourned.

CARROLL F. SMITH,

Secretary of the Conference.

CHAPTER 11

GENERAL REVIEW

OPERATIONS OF STATE HOSPITAL SYSTEM

Medical service

INSTITUTIONS.	Number of physi- cians.	Ratio of physicians to patients.	Annual per capita cost of medical service.
Utica State Hospital.....	7	1 to 145	11.83
Willard State Hospital	11	1 to 206	7.166
Hudson River State Hospital	9	1 to 201	9.02
Middletown State Homeopathic Hos- pital	7	1 to 174	10.023
Buffalo State Hospital	7	1 to 217	6.66
Binghamton State Hospital.....	9	1 to 149	11.00
St. Lawrence State Hospital.....	8	1 to 173.7	9.783
Rochester State Hospital.....	5	1 to 110	18.38
Long Island State Hospital	16	1 to 176	9.256
Manhattan State Hospital.....	46	1 to 145.93	9.216
Total	125	.....	.....
Average.....	.....	1 to 165	12.678

Operations of State Hospital System

Employees

INSTITUTIONS.	Total number of employees.	Ratio of all employees to patients.	Ratio of attendants to patients.	Annual per capita cost of all employees.
Utica State Hospital.....	220	1 to 4.6	1 to 8.18	\$78.37
Willard State Hospital.....	471	1 to 4.80	1 to 9.26	62.273
Hudson River State Hospital..	404	1 to 4.49	1 to 7.65	71.50
Middletown State Homeopathic Hospital	269	1 to 4.528	1 to 8.066	70.136
Buffalo State Hospital	318	1 to 4.77	1 to 7.44	62.873
Binghamton State Hospital....	320	1 to 4.2	1 to 6.8	74.75
St. Lawrence State Hospital...	351	1 to 3.96	1 to 7.314	72.168
Rochester State Hospital.....	120	1 to 4.6	1 to 8.5	71.66
Long Island State Hospital....	591	1 to 4.75	1 to 8.394	64.124
Manhattan State Hospital.....	1,182	1 to 5.68	1 to 9.10	56.34
Total	4,246	.....	.....	.....
Average .....	.....	1 to 4.86	1 to 7.44	64.28

Fuel and light

INSTITUTIONS.	Total annual cost.	Annual per capita cost.	Number of tons consumed.	Average purchase price.
Utica State Hospital.....	\$11,755.27	\$11.59	4,833	\$2.22
Willard State Hospital....	20,936.70	9.259	10,575	1.979
Hudson River State Hospital	34,951.79	19.28	10,723	3.10
Middletown State Homeopathic Hospital	17,466.96	14.341	6,576	2.53
Buffalo State Hospital	15,763.96	10.375	11,316	1.337
Binghamton State Hospital	25,245.67	18.85	14,095½	1.79
St. Lawrence State Hospital	33,527.68	24.126	11,048	2.95
Rochester State Hospital..	8,435.20	15.23	2,803	2.90
Long Island State Hospital	49,986.68	17.776	17,391	2.69
Manhattan State Hospital.	88,904.88	13.243	26,303	3.88
Total	\$306,974.79	.....	115,663	.....
Average .....	.....	\$14.876	.....	\$2.64

TENTH ANNUAL REPORT OF THE

Operations of State Hospital System

Deaths — Exclusive of transfers

INSTITUTIONS.	On number admitted.	On average daily population.	On whole number treated.	On number discharged.
Utica State Hospital.....	21.27	5.06	4.50	27.01
Willard State Hospital	44.23	5.8	4.7	49.05
Hudson River State Hospital..	23.43	10.26	7.67	47.33
Middletown State Homeopathic Hospital	32.63	6.32	5.46	39.09
Buffalo State Hospital	21.49	9.47	7.48	35
Binghamton State Hospital....	48.81	7.69	6.65	49.28
St. Lawrence State Hospital..	41.25	8.49	7.1	45.384
Rochester State Hospital.....	23.756	7.775	6.082	32.575
Long Island State Hospital....	43.10	10.13	8.43	50.17
Manhattan State Hospital	38.59	9.04	7.12	30.70
Average.....	41.98	8.51	6.82	35.78

Recoveries—Exclusive of transfers

INSTITUTIONS.	On number admitted.	On average daily population	On whole number treated.	On number discharged.
Utica State Hospital	28.73	7.59	6.08	36.49
Willard State Hospital	22.26	2.7	2.1	22.62
Hudson River State Hospital..	15.87	6.95	5.19	32.06
Middletown State Homeopathic Hospital	31.78	6.16	5.32	38.07
Buffalo State Hospital	20	5.068	4.7	24.8
Binghamton State Hospital....	31.28	4.92	4.26	31.57
St. Lawrence State Hospital ..	28.82	5.828	4.87	31.153
Rochester State Hospital.....	24.309	7.956	6.223	33.333
Long Island State Hospital ...	26.13	6.61	5.50	32.74
Manhattan State Hospital.....	14.18	3.32	2.62	11.28
Average.....	24.32	4.93	3.95	20.74

Operations of State Hospital System

Statement showing average purchase price and annual per capita cost of staple articles of consumption in the State hospitals during the year ending September 30, 1898.

ARTICLES.	UTICA.		WILLARD.		HUDSON RIVER.		MIDDLETOWN.	
	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.
Fresh meats, per pound.....	\$0.0621	\$14.63	\$0.065	\$13.80	\$0.064	\$17.254	\$0.073	\$16.487
Poultry .....	.11	.214	.091	.348	.117	.485	.116	.681
Wheat flour, per barrel.....	4.94	6.73	4.345	6.49	5.469	6.954	5.271	4.557
Butter .....	.184	8.407	.184	8.219	.174	6.661	.181	8.213
Cheese .....	.077	.712	.076	.86	.078	.619	.087	.507
Milk, gallon.....	.10	7.68	.10	4.465	.109	6.789	.108	8.498
Eggs .....	.122	1.65	.128	2.57	.142	3.785	.111	2.906
Tea .....	.218	1.23	.227	.836	.245	.631	.223	.366
Coffee .....	.114	1.29	.113	1.653	.115	1.792	.116	1.375
Sugar .....	.063	2.42	.053	2.926	.052	2.499	.032	2.96
Liquors, distilled, per gallon.....	1.817	.39	2.12	.15	2.395	.583	2.755	.197

Operations of State Hospital System

Statement showing average purchase price, etc.—(Continued).

ARTICLES.	BUFFALO.		BINGHAMTON.		ST. LAWRENCE.		ROCHESTER.	
	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.
Fresh meats, per pound.....	\$0.0652	\$12.438	\$0.063	\$14.37	\$0.066	\$15.063	\$0.0615	\$11.95
Poultry.....	.1154	.624	.119	.54	.1221	.806	.126	.71
Wheat flour, per barrel.....	4.884	5.455	5.114	6.87	4.91	7.016	4.94	5.35
Butter..	.185	8.294	.183	8.62	.177	8.044	.164	7.31
Cheese.....	.0817	1.057	.083	.74	.0872	.777	.087	.67
Milk, gallon.....	.1056	1.377	.092	6.09	.0882	4.852	.101	8.025
Eggs.....	.134	3.208	.149	3.21	.117	3.333	.141	2.208
Tea.....	.2163	.86	.228	1.53	.204	.922	.203	.626
Coffee.....	.113	1.118	.113	1.64	.1199	2.004	.111	.902
Sugar.....	5.314	2.352	.053	3.22	.0533	3.233	.053	2.345
Liquors, distilled, per gallon.....	2.076	.11	2.018	.25	2.019	.235	2.305	.17

Operations of State Hospital System

Statement showing average purchase price, etc.—(Concluded).

ARTICLES.	LONG ISLAND.		MANHATTAN.		ALL HOSPITALS.	
	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.	Average purchase price.	Annual per capita cost.
Fresh meats, per pound	\$0.0676	\$12.339	\$0.0631	\$14.006	\$0.065	\$14.23
Poultry .....	.109	.391	.1162	.457	.122	.489
Wheat flour, per barrel	64.758	4.091	5.0955	7.134	4.97	6.267
Butter .....	.1815	7.653	.1943	9.349	.181	8.40
Cheese .....	.0737	.826	.0849	.879	.082	.786
Milk, gallon	a.14	.906	a.1288	.189	.107	3.17
Eggs .....	.1489	8.03	.1698	4.375	.136	3.42
Tea .....	.2245	.725	.227	.764	.23	.82
Coffee .....	.1141	1.983	.1162	2.296	.115	1.85
Sugar .....	.0503	2.348	.0516	3.115	.032	2.83
Liquors, distilled, per gallon	1.459	.151	2.0827	.037	2.168	.175
a Long Island average purchase price milk, condensed, per quart .....						.5018
Long Island annual per capita cost milk, condensed, per quart						2.435
a Manhattan average purchase price milk, condensed, per quart .....						.1172
Manhattan annual per capita cost milk, condensed, per quart						5.78
b Long Island average purchase price bread, per pound .....						.0275
Long Island annual per capita cost bread, per pound						3.746

PART II

Licensed Private Asylum System

CHAPTER 12

General Administration — Private Institutions

There has been no material change in the status of institutions comprised in the licensed private asylum system during the past year, beyond the reinstatement of Dr. Combes' sanitarium. Dr. Combes surrendered his license some years ago, but returned to the service and has now located at Flushing, Long Island. The addition of this institution makes the total number of private institutions nineteen.

During the year there has been a slight falling off in the recovery rate in these institutions, and the death rate has also decreased to some extent.

The Commission would renew its suggestion that some further efforts be made to provide occupation and diversion for patients committed to private asylums. While it is aware that strenuous objection may be made by the superintendents of these institutions to provide any kind of employment, it is believed that if the matter were properly presented to the relatives of patients, light employment would be agreed to, and, in fact, might be regarded by them as desirable. There is little room for argument that a certain amount of occupation, even if it is of a light variety, tends to aid in the recovery of the insane.

CHAPTER 13

GENERAL REVIEW

OPERATIONS OF LICENSED PRIVATE ASYLUM SYSTEM

Medical service.

INSTITUTIONS.	Number of physicians.	Physicians to patients.	Attendants to patients.
Nineteen	41	1 to 21	1 to 3

Recoveries.

INSTITUTIONS.	Average daily population.	Recoveries.	Percentage.
Nineteen	845	127	15.03

Deaths.

INSTITUTIONS.	Average daily population.	Deaths.	Percentage.
Nineteen	845	70	8.28

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PART III

GENERAL HOSPITAL SYSTEM

CHAPTER 14

Insanity Within the Meaning of the Statute

The laws of this state for the care and treatment of the insane by the state, in their spirit and evident intent do not include within the term insane all persons suffering from degeneracy of the mind. The statute definitely gives to the medical superintendent of a state hospital power to determine whether a case presented for admission is insane "within the meaning of the statute." It being admitted that individuals may be technically of unsound mind or "insane," but not actually so, the statutes regulating state care for the insane aim to limit it to those for whom such care is necessary and expedient, since the state alone can effectively provide it in a measure suited to their condition. It is clear that the spirit of the law does not contemplate the care of aged persons, whose mental decline is simply a result of old age, and is a decay pure and simple, not the effect of a morbid state of the body. An aged person whose mental faculties, physiologically speaking, are gradually darkening as the end approaches, may be considered technically insane, although neither common sense nor the law so construes him; and it is now within the jurisdiction of the executive officer of a hospital to determine where such line of distinction should be drawn. When the state care act went into effect a frequent prediction was that local officers of the poor would attempt to relieve the county or town from all cases for which certificates of insanity could be procured, by committing them to the state hospitals. Fortunately this prediction has not been verified in any very great degree, although instances have occurred where the defining line, as herein set forth, has been warmly contested. A greater embarrassment has been met in the attempt on the part of friends or relatives to commit the aged or non-industrial mem-

Insanity Within the Meaning of the Statute

bers of the household to state hospitals, and thus relieve themselves of a burden. If it were practicable, it would be desirable to define more precisely the line between insanity and senility, but such a definition is not easy or perhaps expedient for the reason that senile conditions are frequently complicated by an actual insanity, or by tendencies which render it quite difficult to care for those old patients in an ordinary household. It must be admitted, however, that the proportion of brain degenerates of advanced age is increasing in the state hospitals, or at least it has increased up to the present time. With the more humane treatment of the insane, and the public confidence in the beneficent care given them in our state hospitals now felt throughout the state, the hesitation that formerly existed to commit friends to such institutions has been removed, and this has also led to increased applications for the admission of persons who hitherto have been cared for by the family. Were a recovery, or even improvement in their mental condition, to be hoped for, it might not be improper to receive these cases for a time, but this result cannot be expected, and when once committed such patients usually remain during life. Another troublesome class of cases are idiots on the border line of insanity, or those idiots having maniacal outbreaks which might reasonably be considered as an undeveloped inhibitory power over the will not due to any morbid condition except lack of development which creates them idiots, and consequently making them idiots uncomplicated by insanity. These persons belong in the institutions designed for idiots, but are there often refused on the ground of insanity, whereupon their only refuge is the insane hospital. Another similar class of cases are the epileptics who have become demented from the inroads of disease. Technically insane, they still present clinical features which would more properly place them in institutions for epileptics, but unfortunately our epileptic hospitals will not receive cases complicated by insanity, and their destiny seems to fix them in an insane hospital. In other words, the hospital for the insane

Insanity Within the Meaning of the Statute

becomes the dumping ground for all mental defectives that are on or over the border line of that form of defect for which the state has made other provision. It is conceded that such cases need care, and as it has not been provided anywhere else within the accepted construction of organic laws, the insane hospitals are forced to bear the burden. It has been necessary during the year for superintendents to decline a large number of cases upon the ground that they were not insane within the meaning of the statute; but through the interposition of friendly and sensible physicians making the medical certificate and of a medical officer usually sent from the hospital to make an additional examination, the friends or the county officers in most instances have been led to co-operate with the hospital, and to make other and more suitable provision for these cases. Thus very little irritation has resulted from the action of the superintendents. During the past year a committee appointed by the State Board of Charities, in conjunction with a committee from the Commission, agreed upon a definition of idiocy, which seems to fairly interpret the meaning of the statute and to sufficiently serve the purpose of classification. This will henceforth be applied to idiots, and will probably relieve any further embarrassment from this source. With epileptics the difficulty is greater because there are few epileptics whose disease has been of long standing where the mind is not more or less affected, so that with a majority of epileptics insanity may be said to exist as a complication. Thus far, however, but little embarrassment has resulted from the refusal of the epileptic hospital to receive these cases, and in several instances where insanity has supervened in epileptics at the Craig Colony they have been transferred to the district state hospital. The cases of senile debility will always require that careful discrimination which now seems to be exercised by the several superintendents.

The report of the committee referred to is herewith appended:

Insanity Within the Meaning of the Statute***To the State Board of Charities and the State Commission in Lunacy:***

Under the provisions of chapters 545 and 546 of the Laws of 1896, enacted by the legislature in accordance with the amended constitution, the care of certain classes of mentally defective or diseased subjects was assigned to the State Commission in Lunacy and the State Board of Charities. A lack of clearness in the provisions of the law as to the respective duties and powers of the State Commission in Lunacy and the State Board of Charities as to the assignment of such cases, led to a formal conference on the subject between a special committee from each of the two commissions interested.

The principal topic for consideration by this joint committee has been such a definition of the term "Idiot" as shall remove any obscurity in the relations of either commission as to the mentally deficient or diseased subjects which come under the provisions of the laws of 1896, for the state care of such cases.

The character and form of such a definition have been discussed by the members of the joint committee, and by correspondence and otherwise an expression as to form has been obtained from experts, in this and other countries. These definitions have been carefully classified and arranged according to their forms, legal or medical.

Your committee, at its first session, decided that these cases fall within the class of medical wards, and hence, a definition such as they sought to formulate should be taken from physiological rather than from a legal point of view. This would obviate technicalities which might otherwise arise, and serve to continue, if not increase, existing embarrassments. They further felt that, if possible, such a definition should be brief, and expressed in a single sentence.

In analyzing the several definitions which have been offered it has been found that, in some, the perplexing and troublesome subject of comparative intellectual power was introduced; in others, the degree of loss of pre-existing mental capacity; while others added an age limit.

It is admitted that all of these factors might be included in the consideration of the mental responsibility of an individual, but they should not be introduced in a simple definition of "Idiocy," which is to serve as a guide in the administrative work of the two commissions.

We, therefore, for the above and other reasons, offer the following definition of "Idiocy" for adoption by the State Board of Charities and the State Commission in Lunacy.

"For the purposes of this act the term 'Idiot' shall apply to

Insanity Within the Meaning of the Statute

any person, the development of whose brain has been arrested, either before birth or as the result of some disease or injury in infancy or early childhood, to such a degree as to render him incapable of caring for himself."

In submitting this definition, your committee would emphasize the wide difference between the two conditions of *insanity* and *idiocy*.

Insanity implies mental *disease*; while idiocy pre-supposes a mental *deficiency*; the former condition is marked by a disordered and deranged mental action, and the latter by an absence of mental action, or, if it be at all evident, by defective and deficient mental activity. Under a strict application of the term, the typical idiot, one who observes nothing, appreciates nothing and does nothing, is almost never seen.

For the purposes of this act, as above stated, and to simplify the work of the two commissions, as well as to prevent, as far as possible, the entrance of technicalities into the procedures for the disposal of any such cases, this broad and general interpretation has been adopted.

It will be understood, therefore, that in the work of the two commissions connected with this class, the fact of original or early mental deficiency is the basis upon which the assignment of such cases is established.

Your committee would state that in the consideration of this subject and in their final conclusions as to the form of definition which should be adopted, they have been guided, mainly by the evident intention of the law as enacted, and by the experience of the two commissions in the classification and assignment of such cases for custodial and other care.

In submitting this report finally, we would state that the cordial understanding between the two commissions in regard to points at which their respective duties and jurisdictions touch, will supplement and amplify the general character of the definition herewith presented for adoption.

Respectfully submitted.

P. M. WISE, M. D.,

President State Commission in Lunacy.

ENOCH V. STODDARD, M. D.,

Vice-President State Board of Charities.

CHAPTER 15

Alien and Non-Resident Patients.

For years the statutes have contained provisions designed to prevent or obstruct the admission of non-residents into the state's charitable institutions. Chapter 549 of the laws of 1889 (the supply bill), has the following, which is still in force:

“Hereafter no pauper, who is not a resident within the state for at least one year next prior to the application for his or her admission into any state asylum for idiotic, blind, insane, or deaf and dumb, shall be admitted as an inmate therein.”

This provision must be construed as meaning all persons who are supported at public expense.

Section 30 of chapter 545 of the laws of 1896 provides as follows:

“There shall continue to be the following hospitals for the care and treatment of the poor and indigent insane of the state, which are hereby declared to be corporations; but other insane persons who are residents of the state may be admitted when there is room therein for them. * * *

It is clear therefore that no person, whether private, indigent or pauper, who is not a resident of the state, can be cared for in a state hospital. Unfortunately, however, through want of positive information respecting residence, many persons are admitted to state hospitals who have no legal right to be there, and the Commission is required to remove all non-resident inmates of hospitals, pursuant to section 76 of the insanity law, which reads:

“If an order be issued by any judge committing to a state hospital a poor or indigent person who has not acquired legal settlement in this state, the commission in lunacy shall return such insane person, either before or after his admission, to a state hospital, to the country or state to which he belongs, and for such purpose may expend so much of the money appropriated

Alien and Non-resident Patients

for the care of the insane as may be necessary, subject to the audit of the comptroller."

Under the provisions of this law, during the past fiscal year, 124 patients were removed to other states and countries. Of this number 48 were removed to countries outside of the United States as follows:

Austria, 2; Belgium, 2; Canada, 5; Denmark, 1; England, 10; France, 2; Germany, 7; Ireland, 9; Italy, 2; Norway, 1; Scotland, 1; Sweden, 5; West Indies, 1.

The remainder, 76, were removed to other states. There was expended under the provisions of this law for the removal of aliens, \$5,317.03. It is extremely difficult to estimate the cost of this service in advance, as it depends wholly upon the class of cases and the countries to which they are removed. In some cases patients are disturbed and violent, and require the care of special attendants, and the expense is comparatively large, while in other cases the patient is in such a condition as to go unattended, needing only such care as a steamship officer or employee can give them. Oftentimes the steamship and railroad companies refuse to transport them, and considerable embarrassment is encountered in an effort to effect removal.

Despite all the difficulties and expense incident to removing alien cases, the advantage to the state is very great, as the following figures will show. In the case of the 124 patients removed during the year, it would have required at the rate of \$550 per capita for buildings and furniture to accommodate them, an expenditure of \$68,200. Assuming that these patients would have lived the average duration of insane life, which is estimated at twelve years, and that the cost of maintenance was \$184 annually, which was the average for the past year, there would have been on their account an expenditure of \$124,992, which, added to the cost for construction, and after deducting the expense of transportation, shows a net gain of \$187,875.

If the state did not undertake this work, there would be a constant tendency to find a permanent habitation in the hospitals of this state for the insane of other states and countries.

Alien and Non-resident Patients

The state of New York, by reason of its having within its borders the principal port of entry for immigrants, has endured a disproportionately great burden from the influx of alien and other non-resident indigents. In the eighth annual report of the Commission, it recommended that amendments to the United States immigration laws be sought, but this has not yet been done. The Commission also suggested that it might be profitable for the United States to employ competent persons at the several ports of departure in Europe, as well as at each port of arrival in this country, to examine and pass upon the mental condition of persons seeking residence or citizenship in the United States. The state of New York is far more interested in the exclusion of the defective classes than any other state in the Union. As an illustration of the large burden it must now bear in consequence of its receiving dependent defectives, the statistics show that from the fiscal year ending October 1, 1888, to and inclusive of the fiscal year ending October 1, 1898, a period of ten years, there have been admitted into the public hospitals for the insane of New York 48,587 cases. Of this number 23,721 cases were foreign born, or, in other words, approximately 50 per cent of this vast number.

The suggested amendment of the United States statutes should change the time limit which now provides that any immigrant who becomes insane within one year after the date of his arrival at any United States port may be deported, provided it can be shown that such inability to support himself was the result of causes which existed at the time or prior to the date of his landing. This limit should be extended at least to two years. Insanity is a disease of slow and insidious development, and it is difficult to show when it really began. Immigrants are usually provided with means to maintain themselves for a short time after their arrival in this country, but when those means become exhausted and depression follows as a result of hardship and failure to find employment, insanity may develop. Moreover, it often takes a comparatively long time to locate the arrival of

Allen and Non-resident Patients

an immigrant by reason of the failure to obtain a requisite history upon the admission of the patient.

The law should be amended by striking out the requirement that the insanity should be shown to be the result of causes which existed at or prior to the date of landing. It is often impracticable and sometimes impossible to show this, except in rare cases, and at the best it can be only a matter of opinion. A physician without having absolute knowledge of the fact may be morally convinced that the insanity had existed or was the result of causes which did exist before immigration.

Furthermore a provision should be added to the law that the steamship companies should be required to deport any case, without reference to the length of time, when any one of the United States desires to bring about the deportation of any person who is a public charge, and who is willing to return to his native country. The Commission frequently finds instances when relatives and friends desire the return of insane persons in the hospitals, provided the deportation can be effected without expense to themselves. In such cases the commission has great difficulty in securing the deportation of the insane who do not come strictly within the provisions of the existing statutes, as the steamship companies are unwilling to return an insane person, if known to be such, although in each case the Commission provides a responsible and trained attendant capable of properly caring for the person so deported. There are a number of patients in the New York state hospitals whose friends and relatives would be glad to have them returned, and wherein the objections herein set forth deter the attempt.

It may be said in a general way that if there were an absolute restriction upon immigration, there would be no further increase in the aggregate number of insane persons to be cared for in the state hospitals of New York.

CHAPTER 16

INDUSTRIAL EMPLOYMENT OF THE INSANE

It is no longer disputed that employment of the insane in occupation having a useful purpose is an important remedial feature of their treatment. In public hospitals there is the further advantage of materially promoting economical administration, and to this object much attention has been paid during the past year. The industries in all the hospitals have been increased in variety and extent. This is notably so in the making of clothing, nearly all of which is now manufactured in the hospitals by patients. A limit is necessarily placed upon cost of production, in order that it may not exceed what the same articles can be purchased for in the open market. In several instances industries have been checked or abandoned because it was found that the cost of skilled supervision, added to that of material had exceeded the market price of the manufactured article. This experience, however, is exceptional. In most cases the saving to the hospitals by home manufacture has been considerable. An instance worthy of mention is the roasting of coffee at the Utica State Hospital for all the hospitals. The green berry is bought of the importer, and is shipped in bulk to Utica, where, under skilled direction, patients assist in roasting it, and thence it is distributed in the roasted state to the several state hospitals. This process has been in operation for the whole of the fiscal year, so that a fair comparison with the previous year during which the several hospitals bought their coffee in the open market is possible. The aggregate cost of coffee for all the state hospitals for the year ending September 30, 1897, was \$61,855, and for the year ending September 30, 1898, during which coffee was roasted and ground at Utica, was \$38,130.76.

Industrial Employment of the Insane

In addition to the saving, a superior grade of coffee has been obtained, and it has been absolutely uniform. There is only one grade furnished alike to patients, to employees and to officers. All the spices and condiments used by the several hospitals are treated in the same manner. They are purchased in the crude state, prepared and ground and distributed to meet the needs of the state hospitals. Thus is insured a supply of pure spices and condiments, a form of food supply known to be easier of adulteration than almost any other. The economy effected by this practice can be appreciated by comparison of expenditures for condiments, which, for the fiscal year ending September 30, 1897, was \$2,869.20, while for the last fiscal year, when pure spices were furnished, it amounted to \$2,392.77.

Another large industry that promises excellent results is the manufacture of soap at the Rochester State Hospital. Although its operation has not extended over a period that would admit of an instructive comparison, there is no doubt that economy, as well as useful employment to a large number of patients, will be secured through this industry.

Occupation in farm and garden work is doubtless most conducive to bodily health and mental tranquility among male insane patients; but it is only available for a portion of the year, and during the long winter months recourse must be had to other industries. Hence the various manufactures are brought into requisition more especially in the winter months. The field of labor for women is more restricted than for men. A large part of the domestic work is performed by the women patients, and the manufacture of clothing is engaged in by them. Some effort has been made to engage women in light gardening, and there can be no question of the healthfulness of this employment. The ingenuity and tact of the superintendent and his medical officers is nowhere better shown than in the devices put in practice for the suitable employment of patients.

PART IV

STATISTICS

CHAPTER 17

Statistics of State Hospital System

TABLE No. 1.

Showing the number of registered insane remaining in the State hospitals October 1, 1897, the number admitted on original commitments and by transfers during the year, the total number under treatment and the number remaining September 30, 1898, with the increase or decrease.

INSTITUTIONS.	REMAINING OCTOBER 1, 1897.			ADMITTED ON ORIGINAL COMMITMENTS FROM HOMES.			ADMITTED ON ORIGINAL COMMITMENTS FROM COUNTY HOUSES.			BY TRANSFERS FROM OTHER INSTITUTIONS FOR INSANE.			TOTAL IN CARE DURING YEAR ENDING SEPTEMBER 30, 1898.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Utica State Hospital	472	527	999	105	103	208	6	2	8	52	.....	52	635	632	1,267
Willard State Hospital	1,106	1,153	2,259	141	119	260	8	6	14	128	126	254	1,383	1,404	2,787
Hudson River State Hospital	888	743	1,631	230	189	419	9	13	16	56	300	356	1,180	1,245	2,425
Middletown State Homeopathic Hospital.	575	640	1,175	106	111	217	7	4	8	7	4	11	695	716	1,411
Buffalo State Hospital	529	724	1,253	216	169	385	14	8	26	130	129	259	893	1,030	1,923
Binghamton State Hospital	609	727	1,336	96	95	191	7	9	16	3	1	4	715	832	1,547
St. Lawrence State Hospital	706	645	1,351	157	124	281	4	1	5	3	.....	3	870	790	1,660
Rochester State Hospital	270	253	523	65	102	167	10	6	16	1	.....	1	316	361	707
Long Island State Hospital	1,179	1,537	2,716	342	329	671	4	1	5	7	5	12	1,533	1,872	3,404
Manhattan State Hospital	3,237	3,711	6,948	690	696	1,386	49	122	171	9	7	16	3,985	4,536	8,521
Collins State Homeopathic Hospital .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	101	.....	101	101	.....	101
Total	9,571	10,640	20,211	2,148	2,037	4,185	119	169	288	497	572	1,069	12,335	13,418	25,753

Statistics of State Hospital System

TABLE No. 1—(Concluded).

Showing the number of registered insane remaining in the State hospitals October 1, 1897, the number admitted on original commitments and by transfers during the year, the total number under treatment and the number remaining September 30, 1898, with the increase or decrease.

INSTITUTIONS.	DISCHARGED DURING YEAR ENDING SEPTEMBER 30, 1898.			DIED.			WHOLE NUMBER DISCHARGED DURING YEAR.			REMAINING SEPTEMBER 30, 1898.			INCREASE OR DECREASE.	
	AS NOT INSANE.*									Men.	Women.	Total.	Increase.	Decrease.
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.					
Utica State Hospital	12	6	18	37	25	62	120	91	211	615	541	1,056	57	3
Willard State Hospital	2	...	2	69	63	132	206	263	531	1,115	1,141	2,256	...	...
Hudson River State Hospital	2	2	4	97	89	186	208	183	392	913	1,090	2,002	401	...
Middletown State Homeopathic Hospital .....	...	1	1	50	27	77	117	80	197	878	836	1,714	39	...
Buffalo State Hospital	6	6	11	75	69	144	256	153	411	635	877	1,512	259	...
Binghamton State Hospital .....	...	...	...	50	55	105	104	103	209	611	727	1,338	3	...
St. Lawrence State Hospital	3	3	6	66	49	115	149	111	260	721	679	1,400	59	...
Rochester State Hospital .....	...	...	...	24	19	43	70	66	136	378	295	571	43	...
Long Island State Hospital	6	6	12	143	143	286	289	291	580	1,248	1,578	2,821	103	...
Manhattan State Hospital .....	...	5	5	317	290	607	866	1,111	1,977	3,119	3,435	6,544	...	404
Collins State Homeopathic Hospital .....	...	...	...	...	...	...	...	...	...	101	...	101	101	...
Total	23	27	50	930	837	1,767	2,449	2,459	4,908	9,886	10,939	20,845	1,041	407

* Includes freedriates, opium habitues, etc.

TABLE No. 2.
General Statement of the State Hospitals October 1, 1898.

	Utica State Hospital.	Willard State Hospital.	Hudson River State Hospital.	Middletown State Homeopathic Hospital.	Buffalo State Hospital.	Binghamton State Hospital.
Date of opening.....	1843. 429	1869. 1,107	1871. 756 35	1874. 281	1890. 183	1881. 1,060
Total acreage of grounds and buildings.....	\$1,047,000 00	\$1,466,205 34	\$2,392,839 44	\$1,137,646 18	\$2,500,000 00	\$905,000 00
Value of real estate, including buildings.....	\$95,000 00	\$214,859 52	\$215,730 48	\$86,640 00	\$102,180 53	\$160,000 00
Value of personal property.....	370	750	655	210	70	500
Acreage under cultivation.....						
Receipts during year, maintenance fund:						
Balance on hand October 1, 1897.....	\$2,624 45	\$2,540 40	\$2,808 20	\$6,107 68	\$2,094 12	\$559 95
From State treasury for maintenance on estimates 1 to 12 inclusive.....	175,276 86	334,542 05	328,033 70	167,261 24	242,518 69	247,194 35
From private patients.....	17,544 46	866 43	17,847 65	49,436 09	7,423 29	3,840 61
From reimbursing patients.....	9,514 57	18,949 55	13,835 65	18,230 44	12,460 14	6,121 65
From all other sources.....	1,261 19	2,166 43	2,819 84	1,614 53	3,525 77	1,328 76
Total receipts for maintenance.....	\$206,221 53	\$359,085 06	\$364,395 04	\$237,649 98	\$268,022 01	\$258,845 32
Total receipts from State Commission in Lunacy for extraordinary improvements.....	\$74,070 23	\$15,220 58	\$164,621 97	\$11,383 99	\$121,481 96	\$55,306 17
Total receipts from manufacturing fund.....	\$9,793 92	344 53				
Disbursements during year for maintenance:						
Estimate No. 1. For officers' salaries.....	\$17,300 26	\$21,664 47	\$21,705 86	\$17,221 69	\$19,274 39	\$19,622 43
Estimate No. 2. For wages.....	79,473 86	141,800 29	129,636 02	85,426 49	95,536 01	100,488 72
Estimate No. 3. For provisions and stores.....	51,850 93	109,967 24	111,914 41	77,607 94	89,960 92	72,582 38
Estimate No. 4. For ordinary repairs.....	5,681 27	6,882 69	7,027 60	3,547 53	4,943 39	6,744 21
Estimate No. 5. For farm and grounds.....	9,107 83	5,019 45	10,165 43	5,636 54	7,056 66	6,932 43
Estimate No. 6. For clothing.....	5,530 52	22,164 75	14,120 44	2,801 99	11,212 19	8,456 26
Estimate No. 7. For furniture and bedding.....	4,506 15	6,715 06	11,148 23	6,676 13	8,464 37	4,840 69
Estimate No. 8. For books and stationery.....	2,421 31	2,505 44	3,217 73	1,400 51	2,094 51	1,670 07
Estimate No. 9. For fuel and light.....	11,735 27	21,978 84	34,931 79	17,466 96	15,715 83	24,002 30
Estimate No. 10. For medical supplies.....	2,514 26	2,451 50	3,510 77	1,696 56	3,059 07	1,668 48
Estimate No. 11. For miscellaneous expenses.....	4,124 16	9,663 68	10,199 10	5,575 16	5,017 45	5,763 93
Estimate No. 12. For transportation.....	1,299 40	3,423 43	3,662 89	1,335 53	1,414 90	1,671 25
Total disbursements, estimates 1 to 12 inclusive.....	\$195,565 22	\$354,256 84	\$361,289 17	\$226,613 03	\$263,749 72	\$256,463 15

Statistics of State Hospital System

Total disbursements during year for extraordinary improvements under apportionments by State Commission in Lunacy.....	\$74,070 23	\$15,220 58	\$164,624 97	\$11,383 99	\$121,481 96	\$55,305 17
Total disbursements during year, manufacturing fund.....	32,629 32	466 24				
Balances October 1, 1898:						
General maintenance fund.....	10,636 31	4,828 22	3,105 87	11,036 95	4,272 29	2,382 17
Apportionments by State Commission in Lunacy for extraordinary im-						
provements.....					2,213 54	
Manufacturing fund.....	7,164 60					
Weekly per capita cost on daily average number of patients, estimates 1						
to 12 inclusive.....	3 71	3 019	3 82	3 57	3 33	3 68
Maximum rate of wages paid attendants:						
Men.....	24 00	33 00	33 00	33 00	34 00	45 00
Women.....	18 00	28 00	28 00	28 00	29 00	40 00
Minimum rate of wages paid attendants:						
Men.....	20 00	20 00	20 00	20 00	20 00	20 00
Women.....	14 00	14 00	14 00	14 00	14 00	14 00
Proportion of day attendants to average daily population	1-9.16	1-11.02	1-9	9.82	1-10.18	1-7.6
Proportion of night attendants to average daily population.....	1-7.77	1-72.58	1-51	1-16.84	1-59	1-53.6
Percentage of daily patient population engaged in some kind of useful						
occupation.....	62	50.36	65	28.4	68	50
Estimated value of farm and garden products during year.....	\$21,155 35	\$33,784 21	\$20,994 74	\$11,699 28	\$12,871 64	\$29,055 18
Estimated value of articles made or manufactured by patients during year.	12,000 00	24,112 72	30,900 08	4,350 00	18,734 82	17,813 60

Statistics of State Hospital System

TABLE No. 2—(Concluded).
General Statement of the State Hospitals October 1, 1898.

	St. Lawrence State Hospital.	Rochester State Hospital.	Long Island State Hospital.	Manhattan State Hospital.	Collins State Homeopathic Hospital.	All hospitals.
Date of opening.....	1890.	1891.	1895.	1896.	1898.	7,689.85
Total acreage of grounds and buildings	990	138.755	888.74	1,356	500	\$20,742,428 38
Value of real estate, including buildings.....	\$2,319,726 20	\$312,725 52	\$3,700,000 00	\$4,716,298 70	\$244,996 95	\$1,608,129 40
Value of personal property	\$129,085 00	\$48,565 71	\$180,451 72	\$364,081 55	\$11,534 89	\$8,887
Acreage under cultivation.....	427	92.755	210	288	365	
Receipts during year, maintenance fund.....						
Balance on hand October 1, 1897.....	\$2,473 96	\$1,512 33	\$1,401 76	\$10,412 50	\$12 63	\$32,568 18
From State treasury for maintenance on estimates 1 to 12 inclusive.....	265,199 67	107,317 27	490,458 87	1,219,293 83	21,029 17	8,598,445 70
From private patients	3,056 77	652 95	.....	.....	.....	99,668 25
From reimbursing patients	7,196 29	7,179 46	16,268 27	15,909 24	.....	120,165 26
From all other sources	2,744 16	723 32	4,426 23	3,627 71	1,571 18	25,839 07
Total receipts for maintenance	\$280,670 85	\$117,385 33	\$512,555 13	\$1,249,248 26	\$22,612 93	\$3,876,686 46
Total receipts from State Commission in Lunacy for extraordinary im- provements	\$90,011 06	\$60,400 50	\$335,772 91	\$261,273 65	\$121,261 63	\$1,300,806 65
Total receipts from manufacturing fund.....	5,868 26	.....	4,800 00	717 06	.....	51,523 76
Disbursements during year for maintenance:						
Estimate No. 1. For officers' salaries	\$18,987 99	\$15,586 51	\$33,227 19	\$70,747 95	\$6,340 42	\$261,628 66
Estimate No. 2. For wages	100,290 24	39,628 90	180,317 84	369,339 77	4,510 50	1,326,447 64
Estimate No. 3. For provisions and stores.....	80,103 01	30,855 59	167,426 60	473,348 50	1,761 26	1,267,398 78
Estimate No. 4. For ordinary repairs.....	5,287 44	2,211 31	8,505 75	19,460 19	126 67	70,448 05
Estimate No. 5. For farm and grounds	5,527 68	4,797 07	13,651 33	15,748 08	3,237 31	86,919 61
Estimate No. 6. For clothing.....	11,257 32	4,372 42	17,932 42	95,079 50	206 53	193,134 74
Estimate No. 7. For furniture and bedding.....	7,596 88	2,929 84	12,836 39	19,968 26	101 18	85,783 18
Estimate No. 8. For books and stationery	2,061 56	1,400 75	4,107 84	7,437 68	758 63	29,104 06
Estimate No. 9. For fuel and light	33,329 25	8,443 65	49,986 68	98,638 16	1,839 40	320,108 13
Estimate No. 10. For medical supplies.....	2,167 80	770 46	2,469 52	7,968 16	59 04	28,336 02
Estimate No. 11. For miscellaneous expenses.....	6,757 09	3,582 22	19,867 77	59,617 60	2,716 21	132,884 37
Estimate No. 12. For transportation.....	3,752 62	428 64	1,449 06	787 59	.....	19,427 31
Total disbursements, estimates 1 to 12 inclusive.....	\$277,068 88	\$115,037 76	\$511,778 39	\$1,238,141 44	\$21,657 10	\$3,821,620 70

Statistics of State Hospital System

Total disbursements during year for extraordinary improvements.....	\$79,985 32	\$60,400 50	\$335,772 91	\$261,273 63	\$121,261 63	\$1,300,780 91
Total disbursements during year, manufacturing fund.....	4,186 79	.....	4,800 00	717 05	.....	42,799 40
Balances October 1, 1898:						
General maintenance fund.	3,601 97	2,347 57	776 74	11,101 84	955 83	55,065 76
Apportionments by State Commission in Lunacy for extraordinary im- provements.....	43 91	60,400 50	99,970 78	9,000 11	.....	171,628 81
Manufacturing fund.....	1,633 30	.....	.....	89,635 41	.....	98,633 31
Weekly per capita cost on daily average number of patients, estimates 1 to 12 inclusive	3 83	3 99	3 45	3 53	.....	3 59
Maximum rate of wages paid attendants:						
Men	30 00	33 00	30 00	35 00	.....	*30 00
Women	28 00	26 00	25 00	30 00	.....	*28 20
Minimum rate of wages paid attendants:						
Men	20 00	20 00	20 00	20 00	.....	*20 00
Women	14 00	14 00	14 00	14 00	.....	*14 00
Proportion of day attendants to average daily population.....	1-7.81	1-10.45	1-9.4	1-11	.....	1-9
Proportion of night attendants to average daily population.....	1-17.92	1-35.39	1-43	1-53	.....	1-56
Percentage of daily patient population engaged in some kind of useful occupation	67.9	73.16	52.74	65	.....	58
Estimated value of farm and garden products during year	\$23,217 71	\$10,167 55	\$22,838 40	\$26,692 01	.....	\$211,950 07
Estimated value of articles made or manufactured by patients during year.	18,807 92	9,156 94	35,447 64	105,516 15	.....	276,839 87

*Average

Statistics of State Hospital System.

TABLE No. 3

Showing the assigned causes of insanity in cases admitted during the current year.

CAUSES.	YEAR ENDING SEPTEMBER 30, 1896.			INHERITED PREDISPOSITION.			Unascertained.
	Men.	Women.	Total.	Men.	Women.	Total.	
Moral:							
Adverse conditions (such as loss of friends, business troubles, etc.)	245	255	500	65	78	143	52
Mental strain, worry and overwork (not included in above)	165	182	347	42	60	102	32
Religious excitement	21	30	51	5	9	14	1
Love affairs (including seduction)	23	36	59	7	8	15	13
Fright and nervous shock	18	36	54	1	12	13	5
Physical:							
Intemperance	421	127	548	75	30	105	93
Sexual excess	28	3	31	8	.....	8	4
Veneral diseases	117	21	138	28	5	28	28
Masturbation	90	13	103	23	4	27	18
Sunstroke	56	12	68	11	3	14	4
Accident or injury	96	29	125	15	4	19	17
Pregnancy	.....	12	12	.....	3	3	3
Parturition and puerperium	.....	109	109	.....	26	26	13
Lactation	.....	19	19	.....	4	4	3
Change of life	.....	86	86	.....	27	27	9
Fevers	9	7	16	1	2	3	2
Privation and overwork	30	21	51	10	3	13	8
Epilepsy	91	83	174	20	12	32	35
Other convulsive disorders	4	3	7	1	3	4	.....
Diseases of skull and brain	44	17	61	8	6	14	10
Old age	127	125	252	15	18	33	64
Exophthalmic goitre	.....	1	1	.....	1	1	.....
Epidemic influenza	16	25	41	1	6	7	2
Abuse of drugs	22	16	38	9	4	13	8

Statistics of State Hospital System

Loss of special sense.....	4	1	5	.....	.....	.....	.....	.....
Uraemic poisoning	1	.....	1	.....	.....	.....	.....	.....
Other auto-infection.....	1	1	2	.....	.....	.....	.....	2
All other bodily disorders and ill health.....	102	187	289	20	48	68	38	
Heredity	117	170	287	108	157	265	.....
Congenital defect	26	24	50	11	5	16	11	
Unascertained	863	1,104	1,967	70	108	178	892	
Not insane	27	23	50	2	2	4	1	
Total.....	2,764	2,778	5,542	551	648	1,199	1,368	

TENTH ANNUAL REPORT OF THE

Statistics of State Hospital System

TABLE No. 4.
Showing form of insanity in those admitted, recovered and died during the year ending September 30, 1898,
and since October 1, 1898.
DURING YEAR ENDING SEPTEMBER 30, 1898.

FORM OF INSANITY.	UTICA STATE HOSPITAL.			WILLARD STATE HOSPITAL.			HUDSON RIVER STATE HOSPITAL.			MIDDLETOWN STATE HONORO-PATHIC HOSPITAL.			BUFFALO STATE HOSPITAL.			BINGHAMTON STATE HOSPITAL.		
	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.
Mania, acute delirious	47	26	7	46	23	9	46	40	9	1	17	4	64	27	4	13	27	...
Mania, acute	13	7	1	8	1	1	9	6	1	4	2	...	4	1	13	13	5	...
Mania, recurrent	20	...	7	77	1	15	26	...	7	...	1	...	40	1	...	23	1	...
Mania, chronic	64	23	6	78	34	34	109	74	21	31	46	5	107	45	13	90	34	7
Melancholia, acute	13	6	...	...	...	...	5	5	1	...	...	...	2	1	...	14	6	5
Melancholia, simple	9	...	5	69	2	18	51	...	13	6	...	...	19	1	6	...	...	...
Melancholia, chronic	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alternating (circular) insanity	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paranoia	5	...	13	21	...	8	8	...	...	27	6	...	13	...	...	...	...	...
General paralysis	1	...	...	...	...	...	...	...	...	...	...	...	41	...	30	15	...	21
Dementia, primary	90	2	18	220	...	56	266	...	81	...	...	...	217	1	...	80	...	46
Dementia, terminal	9	...	2	8	...	10	20	...	9	2	...	...	50	...	4	11	...	13
Epilepsy with insanity	6	...	...	5	...	1	11	...	1	6	...	...	16	...	...	2	...	...
Imbecility with maniacal attacks .....	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...
Lilacy	14	...	...	...	...	...	5	...	...	1	...	...	20	...	1	...	...	...
Not insane* .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Unclassified .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	265	79	63	526	81	182	794	170	136	256	75	77	670	77	144	211	66	103

* Includes cases of alcoholism, drug habit, etc. † Includes secondary.

Statistics of State Hospital System

TABLE No. 4—(Continued).
 Showing form of insanity in those admitted, recovered and died during the year ending September 30, 1898,
 and since October 1, 1898.
 DURING YEAR ENDING SEPTEMBER 30, 1898.

FORM OF INSANITY.	ST. LAWRENCE STATE HOSPITAL.			ROCHESTER STATE HOSPITAL.			LONG ISLAND STATE HOSPITAL.			MANHATTAN STATE HOSPITAL.			COLLINS STATE HOMOPATHIC HOSPITAL.			ALL HOSPITALS.		
	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.
Mania, acute delirious	43	37	4	2	17	2	5	79	9	4	1	9	...	...	...	23	4	21
Mania, acute	4	5	1	4	9	...	132	7	17	191	63	46	...	...	...	711	359	109
Mania, recurrent	4	...	...	...	...	...	24	4	...	14	4	4	...	...	...	100	38	11
Mania, chronic	14	...	16	24	3	...	37	4	17	52	...	17	...	...	...	337	10	98
Melancholia, acute	60	37	10	30	12	1	152	63	30	490	146	48	...	...	...	1,360	528	165
Melancholia, simple .....	...	...	...	15	6	...	17	7	...	4	1	...	...	...	...	56	39	1
Melancholia, chronic	26	2	7	9	1	2	44	9	16	163	1	65	...	...	...	418	22	129
Alternating (circular) insanity	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	...	1
Paranoia	18	...	...	3	...	...	50	...	5	12	...	...	12	...	...	151	6	5
General paralysis	61	...	20	9	...	14	53	...	38	210	...	144	...	...	...	449	...	337
Dementia, primary	3	2	1	2	...	...	4	8	17	16	7	6	...	...	...	27	19	25
Dementia, terminal	53	...	61	30	...	19	108	...	14	311	...	250	...	...	...	1,007	...	153
Epilepsy with insanity	8	...	5	4	...	2	28	4	26	34	...	16	...	...	...	178	4	86
Imbecility with maniacal attacks	13	...	...	2	...	2	16	...	...	44	...	6	...	...	...	131	...	10
Idiocy .....	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	4	...	1
Not insane*	6	...	...	...	...	...	11	...	...	5	...	...	...	...	...	62	...	2
Unclassified .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	289	61	113	184	44	45	688	166	285	1,571	223	607	101	...	...	5,542	1,018	1,759

* Includes cases of alcoholism, opium habit, etc.

TENTH ANNUAL REPORT OF THE

Statistics of State Hospital System

TABLE No. 4—(Continued).

Showing form of insanity in those admitted, recovered and died during the year ending September 30, 1898, and since October 1, 1898.
SINCE OCTOBER 1, 1898.

FORM OF INSANITY.	UTICA STATE HOSPITAL.			WILLARD STATE HOSPITAL.			HUDSON RIVER STATE HOSPITAL.			MIDDLETOWN STATE HOSPITAL.			BUFFALO STATE HOSPITAL.			BINGHAMTON STATE HOSPITAL.		
	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.
Mania, acute delirious	2	284	2	2	192	6	58	15	24	9	...	10	8	1	5	...	...	...
Mania, acute	852	29	2	474	21	11	143	325	90	679	449	44	162	442	75	225	119	17
Mania, recurrent	51	29	2	41	21	11	14	11	7	22	15	4	19	24	2	85	35	13
Mania, chronic	291	5	55	497	21	226	333	10	49	130	15	20	351	9	21	412	66	122
Mania, bipolar, acute	1,022	441	92	651	214	140	1,315	506	105	900	486	61	1,065	436	111	290	122	24
Mania, bipolar, chronic	55	27	6	...	...	...	96	82	7	...	...	...	...	...	...	...	...	...
Delirium, acute	267	18	54	419	25	58	330	19	120	92	11	12	143	12	58	324	47	84
Delirium, chronic	12	2	1	2	...	...	2	...	...	12	...	...	4	...	...	7	...	1
Paranoia	13	...	...	...	...	...	67	...	...	12	...	...	417	...	...	8	...	...
General paresis	168	...	178	115	...	62	299	...	105	144	23	12	105	...	180	81	...	30
Dementia primary	24	13	2	...	...	...	46	22	16	13	...	...	...	3	...	44	11	10
Dementia terminal	205	...	275	1,511	...	144	1,536	...	521	551	6	...	7	...	315	421	...	353
Epilepsy with insanity	151	5	42	168	...	141	256	...	48	137	...	15	145	6	18	157	...	96
Epilepsy with maniacal attacks	34	...	4	88	...	14	154	...	18	57	...	4	31	...	...	17	...	1
Idiocy	1	...	...	37	...	15	...	...	...	2	...	...	...	...	...	10	...	...
Not insane*	82	...	1	10	...	...	42	...	...	12	...	...	...	...	2	5	...	...
Unclassified	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	8,716	961	609	4,066	475	1,560	5,859	1,068	1,368	2,661	1,006	617	4,361	1,017	793	2,259	403	809

* Includes cases of alcoholism, opium habit, etc. † Paranoia included in mania group before October 1, 1894.

Statistics of State Hospital System

TABLE No. 4—(Concluded).
 Showing form of insanity in those admitted, recovered and died during the year ending September 30, 1898, and
 since October 1, 1888.
 SINCE OCTOBER 1, 1888.

FORM OF INSANITY.	ST. LAWRENCE STATE HOSPITAL.			ROCHESTER STATE HOSPITAL.			LONG ISLAND STATE HOSPITAL.			MANHATTAN STATE HOSPITAL.			COLLINS STATE HOMOEOPATHIC HOSPITAL.			ALL HOSPITALS.		
	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.
Mania, acute delirious	1	278	99	533	127	26	1,023	436	11	16	5	13	...	...	19	8,319	3,367	1,123
Mania, acute	44	17	3	43	30	5	99	53	6	361	83	43	...	...	344	822	344	76
Mania, recurrent	220	5	68	142	7	89	570	44	142	514	9	350	...	...	1,021	3,552	1,900	1,021
Mania chronic	113	173	57	145	69	12	1,071	394	173	5,832	1,061	888	...	...	1,745	32,045	4,082	1,745
Melan holla acute	127	49	6	113	81	...	19	7	...	73	7	...	...	...	18	469	154	18
Melan holla, simple	220	4	38	83	6	14	414	87	132	1,328	16	468	...	...	1,116	3,803	245	1,116
Melan holla chronic	7	...	...	12	5	...	10	1	...	47	...	...	...	...	6	116	6	4
Alternating (circular) insanity	39	...	...	11	...	...	111	...	...	37	...	...	...	...	25	443	25	27
Paranoia	150	1	102	40	...	66	422	...	302	1,663	...	1	...	...	1	3,318	...	2,489
General paralysis	16	7	21	17	...	3	521	94	263	510	78	109	...	...	479	1,240	230	479
Dementia, primary	326	...	394	346	5	173	1,008	16	682	2,253	...	2,324	...	...	83	10,938	53	6,016
Dementia, terminal	140	4	20	53	...	81	277	18	131	294	...	143	...	...	294	1,701	93	294
Epilepsy with insanity	83	...	4	24	...	...	81	...	29	301	...	34	...	...	110	882	1	110
Imbecility with maniacal attacks	28	...	2	...	...	...	13	...	5	34	...	6	...	...	31	137	...	31
Idiocy	31	...	1	3	...	2	23	...	1	25	...	...	...	...	10	373	...	10
Not insane*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	87	...	...
Unclassified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	3,148	536	677	11,453	2,933	563	6,639	1,161	3,032	16,716	1,825	6,018	...	...	...	48,693	8,737	14,976

* Includes cases of alcoholism, opium habit, etc.

TENTH ANNUAL REPORT OF THE
Statistics of State Hospital System

TABLE No. 5.
Showing results of treatment in presumably curable cases for the current year.

CURABLE CONDITIONS.	PRESENT AT BEGINNING OF YEAR.			ADMITTED DURING YEAR.			UNDER TREATMENT DURING YEAR.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Melancholia in acute forms:									
First admission	377	391	768	543	538	1,081	920	929	1,849
Second admission	21	26	47	61	51	112	82	77	159
Third admission	5	9	14	13	13	26	18	22	40
Mania in acute forms:									
First admission	178	223	401	275	340	615	453	563	1,016
Second admission	20	27	47	37	39	76	57	66	123
Third admission	9	11	20	15	9	24	24	20	44
All other curable forms:									
First admission	45	62	107	30	123	153	75	185	260
Second admission	8	10	18	11	9	20	19	19	38
Third admission	1	.....	1	5	6	11	6	6	12

Statistics of State Hospital System

TABLE No. 5—(Continued).
Showing results of treatment in presumably curable cases for the current year.

LENGTH OF INTERVAL OF COMPLETE IMMUNITY FROM SYMPTOMS OF INSANITY IN CASES PREVIOUSLY DISCHARGED RECOVERED—NOW READMITTED.																									
CURABLE CONDITIONS.	UNDER 3 MONTHS.				FROM 3 MONTHS FROM 1 TO 2 YEARS.				FROM 2 TO 3 YEARS.				FROM 3 TO 4 YEARS.				FROM 4 TO 5 YEARS.				AVERAGE LENGTH OF IMMUNITY				
	Men.		Women.		Men.		Women.		Men.		Women.		Men.		Women.		Men.		Women.		Years.		Months.		
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Years.	Months.	Years.	Months.	
Melancholia in acute forms:																									
First admission.....	8	3	12	14	9	11	3	8	4	2	3	11	14	2	1	3	11	14	2	1	1	8	3	3	
Second admission.....																									
Third admission.....	1	1	6	4	2	3	3	2	1	1	1	1	2	1	1	1	1	2	1	1	1	1	1	11	
Mania in acute forms:																									
First admission.....	6	3	8	11	6	6	3	1	5	3	1	7	12	2	2	1	7	12	5	1	2	4	3	9	
Second admission.....		1	4	4	5	2	2	2			2	3					3				1	9	3	5	
Third admission.....																									
All other curable forms:																									
First admission.....																									
Second admission.....	1		4	1	3		2	1	1		2	1					2	1				8	3	11	
Third admission.....			1	1					1		2						2		2			7	1		

Statistics of State Hospital System

TABLE No. 5—(Concluded).
Showing results of treatment in presumably curable cases for the current year.

CURABLE CONDITIONS.	DISCHARGED RECOVERED DURING YEAR.			AVERAGE LENGTH OF TREATMENT OF RECOVERED CASES. (LAST ATTACK.)				DIED DURING YEAR.			TRANSFERRED TO OTHER GROUPS.			REMAINING AT CLOSE OF FISCAL YEAR.		
	Men.	Women.	Total.	MEN.		WOMEN.		Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
				Years.	Months.	Years.	Months.									
Melancholia in acute forms:																
First admission.....	252	246	498	.....	8	.....	8	64	62	126	103	90	193	409	482	891
Second admission.....	22	29	51	.....	11	.....	9	2	7	9	20	12	32	45	32	77
Third admission.....	5	7	12	.....	5	.....	7	.....	1	1	5	3	8	7	10	17
Mania in acute forms:																
First admission.....	166	175	341	.....	8	.....	7	42	55	97	50	65	115	170	261	431
Second admission.....	16	19	35	.....	10	.....	6	5	1	6	12	6	18	26	38	64
Third admission.....	10	2	12	.....	6	.....	1	1	.....	1	2	3	5	9	14	23
All other curable forms:																
First admission.....	14	27	41	.....	2	.....	8	3	8	11	6	31	37	51	105	156
Second admission.....	2	8	10	.....	2	.....	8	2	1	3	9	5	14	7	3	10
Third admission.....	1	1	2	.....	5	.....	1	.....	2	2	1	1	2	7	2	9

Statistics of State Hospital System

TABLE No. 6.

Showing the duration of insanity previous to admission, and the period under treatment of patients discharged recovered during the current year and since October 1, 1888.

DURATION PREVIOUS TO ADMISSION.	YEAR ENDING SEPTEMBER 30, 1898.		
	Men.	Women.	Total.
Under one month	144	174	318
One to three months	121	120	241
Three to six months	69	76	145
Six to nine months	23	33	56
Nine months to one year	16	10	26
One year to eighteen months	26	14	40
Eighteen months to two years	5	11	16
Two to three years	10	15	25
Three to four years	6	8	14
Four to five years	3	5	8
Five to ten years	2	3	5
Ten to twenty years	3	4	7
Not insane* .....	.....	.....	.....
Unascertained	71	46	117
Total	499	519	1,018

PERIOD UNDER TREATMENT.			
Under one month	6	8	14
One to three months	88	77	165
Three to six months	159	163	322
Six to nine months	105	99	204
Nine months to one year	43	64	107
One year to eighteen months	49	47	96
Eighteen months to two years	16	23	39
Two to three years	10	22	32
Three to four years	7	7	14
Four to five years	9	6	15
Five to ten years	6	3	9
Ten to twenty years	1	.....	1
Not insane* .....	.....	.....	.....
Total	499	519	1,018

* Includes cases of alcoholism, opium habit, etc.

Statistics of State Hospital System

TABLE No. 6—(Concluded).

Showing the duration of insanity previous to admission, and the period under treatment of patients discharged recovered during the current year and since October 1, 1888.

DURATION PREVIOUS TO ADMISSION.	SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.
Under one month	1,415	1,444	2,859
One to three months	920	1,033	1,953
Three to six months	454	525	979
Six to nine months	255	263	518
Nine months to one year	96	96	192
One year to eighteen months	152	173	325
Eighteen months to two years	48	47	95
Two to three years	98	102	200
Three to four years	51	47	98
Four to five years	28	26	54
Five to ten years	58	57	115
Ten to twenty years	24	36	60
Not insane* .....	.....	.....	.....
Unascertained	736	553	1,289
Total	4,335	4,402	8,737

PERIOD UNDER TREATMENT.			
Under one month	132	87	219
One to three months	941	726	1,667
Three to six months	1,282	1,341	2,623
Six to nine months	757	862	1,619
Nine months to one year	413	490	903
One year to eighteen months	394	444	838
Eighteen months to two years	139	159	298
Two to three years	136	159	295
Three to four years	72	62	134
Four to five years	30	21	51
Five to ten years	33	41	74
Ten to twenty years	5	10	15
Thirty to forty years	1	.....	1
Not insane* .....	.....	.....	.....
Total	4,335	4,402	8,737

* Includes cases of alcoholism, opium habit, etc.

TABLE No. 7.

Showing the causes of death of patients who died during the current year and since October 1, 1888.

CAUSE OF DEATH	YEAR ENDING SEPTEMBER 30, 1888			SINCE OCTOBER 1, 1888		
	Men	Women	Total	Men	Women	Total
Specific Infectious Diseases:						
Typhoid fever.....	3	6	9	42	32	74
Scarlet fever.....	.....	.....	.....	1	.....	1
Measles.....	.....	.....	.....	.....	1	1
Mumps.....	.....	.....	.....	.....	1	1
Smallpox.....	.....	.....	.....	2	2	4
Influenza.....	.....	2	2	13	55	68
Cerebro spinal meningitis.....	.....	.....	.....	1	2	3
Diphtheria.....	.....	.....	.....	2	1	3
Erysipelas.....	3	9	12	35	46	81
Septicemia and pyemia.....	7	5	12	73	28	101
Dysentery.....	2	9	11	43	63	106
Malarial affections.....	.....	1	1	1	3	4
Syphilis.....	1	.....	1	5	8	13
Tuberculosis.....	77	125	202	553	1,715	2,268
Anthrax.....	.....	.....	.....	2	.....	2
Constitutional Diseases:						
Rheumatism (or rheumatic affections).....	.....	1	1	1	3	4
Arthritis Deformans.....	.....	1	1	.....	1	1
Diabetes mellitus and diabetes insipidus.....	.....	1	1	3	5	8
Scurvy, purpura and haemophilia.....	.....	.....	.....	2	9	11
Marasmus.....	.....	.....	.....	1	2	3
Diseases of the Digestive System:						
Mouth, salivary glands, pharynx, tonsils and œsophagus.....	1	2	3	7	3	10
Diseases of the stomach.....	42	57	99	417	489	906
Diseases of the intestines.....	}					

Statistics of State Hospital System

CAUSE OF DEATH	YEAR ENDING SEPTEMBER 30, 1898			SINCE OCTOBER 1, 1888		
	Men	Women	Total	Men	Women	Total
Diseases of the Digestive System—(Concluded):						
Diseases of the liver.....	4	3	7	46	29	75
Diseases of the pancreas.....	1	.....	1	1	.....	1
Diseases of the peritoneum.....	8	3	11	48	39	87
Diseases of the Respiratory System:						
Diseases of the nose and larynx.....	.....	1	1	4	3	7
Diseases of the bronchi.....	6	5	11	61	53	114
Diseases of the lungs.....	90	78	168	1,128	684	1,812
Diseases of the pleura.....	}					
Diseases of the Circulatory System:						
Diseases of the pericardium.....	2	.....	2	7	8	15
Diseases of the heart.....	77	101	178	585	697	1,282
Arterio-sclerosis.....	1	.....	1	8	12	20
Aneurism.....						
Diseases of the Blood and Ductless Glands:						
Anemia, pernicious anemia and leukemia.....	1	3	4	5	5	10
Hodgkin's disease, Addison's disease and myxœdema.....	1	.....	1	2	.....	2
Exophthalmic goitre.....	.....	.....	.....	.....	3	3
Diseases of the genito-urinary system.....	89	63	152	406	391	797
Diseases of the Nervous System:						
Diseases of the nerves.....	.....	2	2	1	11	12
Diseases of the spinal cord.....	3	3	6	26	21	47
Diseases of the meninges.....	7	4	11	105	50	155

Statistics of State Hospital System

Organic diseases of the brain (tumor, abscess, embolism, thrombosis, hemorrhage and other gross lesions)	86	31	117	517	560	1,077
Functional nervous diseases (paralysis agitans, chorea, eclampsia, hysteria, neurasthenia)	13	23	36	128	53	181
Epilepsy	22	23	45	194	170	364
Acromegaly .....	.....	.....	.....	.....	.....	.....
Mental Diseases:						
Exhaustion of acute mental disease	63	87	150	848	881	1,729
Exhaustion of chronic mental disease						
General paralysis of the insane	262	55	317	1,943	313	2,256
The Intoxications; Heat-stroke; Obesity:						
Alcoholism .....	.....	.....	.....	6	1	7
Opium habit .....	.....	.....	.....	.....	.....	.....
Metallic poisoning .....	.....	.....	.....	.....	.....	.....
Heat-stroke	1	2	3	4	3	7
Obesity .....	.....	.....	.....	.....	.....	.....
Uraemia .....	.....	3	3	.....	3	3
Debility of old age	38	98	136	344	457	801
Accident	3	.....	3	36	21	57
Suicide	3	1	4	59	22	81
Surgical and gynecological diseases and diseases of the skin	13	19	32	103	198	301
Malignant new growths or cancer						
Total	930	827	1,757	7,819	7,157	14,976

Statistics of State Hospital System

TABLE No. 8.
Showing hereditary tendency to insanity in patients admitted during the current year and since October 1, 1888.

	YEAR ENDING SEPTEMBER 30, 1898			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Paternal branch.....	181	182	363	1,531	1,356	2,887
Maternal branch.....	174	227	401	1,531	1,821	3,352
Paternal and maternal branches.....	37	47	84	273	301	574
Collateral branches.....	159	305	464	1,651	2,161	3,812
No hereditary tendency.....	1,446	1,358	2,804	10,504	10,080	20,584
Unascertained.....	756	656	1,412	9,356	8,036	17,392
Not insane.....	11	3	14	70	17	87
Total.....	2,764	2,778	5,542	24,916	23,772	48,688

Statistics of State Hospital System

TABLE No. 9.
Showing civil condition of patients admitted during the current year and since October 1, 1888.

	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
CIVIL CONDITION.						
Single.....	1,392	1,077	2,469	12,276	8,897	21,173
Married.....	1,076	1,172	2,248	10,111	10,149	20,260
Widowed.....	243	487	730	2,088	4,383	6,471
Divorced.....	14	9	23	79	95	174
Unascertained.....	39	33	72	362	248	610
Total	2,764	2,778	5,542	24,916	23,772	48,688

Statistics of State Hospital System

TABLE No. 10.
Showing degree of education of patients admitted during the current year and since October 1, 1888.

DEGREE OF EDUCATION	YEAR ENDING SEPTEMBER 30, 1888.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Collegiate.....	72	14	86	544	92	636
Academic	96	111	207	909	950	1,859
Common school.....	1,692	1,518	3,210	12,435	10,031	22,466
Read and write.....	262	263	525	5,421	5,566	10,987
Read only.....	77	147	224	952	1,393	2,345
No education.....	170	262	432	1,766	2,404	4,170
Unascertained.....	395	463	858	2,889	3,336	6,225
Total	2,764	2,778	5,542	24,916	23,772	48,688

Statistics of State Hospital System

TABLE No. 11.

Showing the duration of insanity previous to admission, and the period under treatment of patients who died during the current year and since October 1, 1888.

DURATION PREVIOUS TO ADMISSION.	YEAR ENDING SEPTEMBER 30, 1898.		
	Men.	Women.	Total.
Under one month	106	106	212
One to three months	110	96	206
Three to six months.....	73	46	119
Six to nine months.....	62	49	111
Nine months to one year	24	18	42
One year to eighteen months	82	42	124
Eighteen months to two years	16	15	31
Two to three years.....	72	67	139
Three to four years	28	28	56
Four to six years	47	29	76
Six to ten years	34	37	71
Ten to twenty years	36	38	74
Twenty years and over.....	20	27	47
Not insane*.....	1	1	2
Unascertained	219	228	447
Total	930	827	1,757
PERIOD UNDER TREATMENT.			
Under one month	132	108	240
One to three months	128	93	221
Three to six months.....	120	66	186
Six to nine months.....	61	43	104
Nine months to one year	40	31	71
One year to eighteen months	76	64	140
Eighteen months to two years.....	56	47	103
Two to three years.....	75	77	152
Three to four years	52	73	125
Four to six years.....	67	63	130
Six to ten years.....	56	62	118
Ten to twenty years.....	49	72	121
Twenty years and over.....	18	28	46
Total	930	827	1,757
Average duration of insane life.....	3.7	4.8	4.3

* Includes cases of alcoholism, drug habit, etc.

Statistics of State Hospital System

TABLE No. 11 — (Concluded).

Showing the duration of insanity previous to admission, and the period under treatment of patients who died during the current year and since October 1, 1888.

DURATION PREVIOUS TO ADMISSION.	SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.
Under one month	822	784	1,606
One to three months	890	653	1,543
Three to six months	522	393	915
Six to nine months	440	299	739
Nine months to one year	225	186	411
One year to eighteen months	530	338	868
Eighteen months to two years	181	134	315
Two to three years	534	416	950
Three to four years	303	251	554
Four to six years	292	278	570
Six to ten years	292	297	589
Ten to twenty years	314	311	625
Twenty years and over	187	231	418
Not insane*	4	5	9
Unascertained	2,283	2,581	4,864
Total	7,819	7,157	14,976
PERIOD UNDER TREATMENT.			
Under one month	1,185	929	2,114
One to three months	998	732	1,730
Three to six months	883	618	1,501
Six to nine months	517	423	940
Nine months to one year	442	377	819
One year to eighteen months	675	572	1,247
Eighteen months to two years	425	356	781
Two to three years	672	558	1,230
Three to four years	435	458	893
Four to six years	467	533	1,000
Six to ten years	527	601	1,128
Ten to twenty years	455	687	1,142
Twenty years and over	138	313	451
Total	7,819	7,157	14,976
Average duration of insane life	3.8	5.2	4.5

* Includes cases of alcoholism, drug habit, etc.

TABLE No. 12.
Showing ages of those admitted during the current year and since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From five to ten years.....	.....	.....	.....	3	3	6
From ten to fifteen years.....	6	13	19	80	68	148
From fifteen to twenty years.....	102	99	201	1,060	960	2,020
From twenty to twenty-five years.....	261	227	488	2,437	2,274	4,711
From twenty-five to thirty years.....	280	345	625	2,970	2,931	5,901
From thirty to thirty-five years.....	330	337	667	3,098	2,917	6,015
From thirty-five to forty years.....	397	335	732	3,503	2,827	6,330
From forty to fifty years.....	584	550	1,134	4,956	4,703	9,659
From fifty to sixty years.....	397	419	816	3,335	3,274	6,609
From sixty to seventy years.....	232	270	502	2,052	2,170	4,222
From seventy to eighty years.....	124	146	270	1,066	1,231	2,297
From eighty to ninety years.....	40	32	72	295	335	630
From ninety to one hundred years.....	2	3	5	20	22	42
Unascertained.....	9	2	11	41	57	98
Total.....	2,764	2,778	5,542	24,916	23,772	48,688

Statistics of State Hospital System

TABLE No. 13.
Showing ages of those discharged recovered during the current year and since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1888.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From ten to twenty years.....	36	42	78	269	350	619
From twenty to thirty years.....	124	168	292	1,207	1,461	2,668
From thirty to forty years.....	146	159	305	1,168	1,208	2,376
From forty to fifty years.....	98	94	192	930	780	1,710
From fifty to sixty years.....	63	35	98	470	400	870
From sixty to seventy years.....	25	15	40	225	161	386
From seventy to eighty years.....	7	6	13	53	34	87
From ninety to one hundred years.....	.....	.....	.....	2	.....	2
Unascertained.....	.....	.....	.....	11	8	19
Total	499	519	1,018	4,335	4,402	8,737

Statistics of State Hospital System

TABLE No. 14.
Showing ages of patients who died during the current year and since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From ten to fifteen years.....	.....	1	1	5	11	16
From fifteen to twenty years.....	9	9	18	82	105	187
From twenty to twenty-five years.....	32	39	71	279	320	599
From twenty-five to thirty years.....	38	45	83	460	459	919
From thirty to thirty-five years.....	62	59	121	729	552	1,281
From thirty-five to forty years.....	117	65	182	998	629	1,627
From forty to fifty years.....	185	147	332	1,640	1,334	2,974
From fifty to sixty years.....	180	134	314	1,394	1,262	2,656
From sixty to seventy years.....	153	154	307	1,157	1,194	2,351
From seventy to eighty years.....	109	130	239	787	925	1,712
From eighty to ninety years.....	39	39	78	252	325	577
From ninety to one hundred years.....	3	5	8	12	29	41
Unascertained.....	3	.....	3	24	12	36
Total.....	930	827	1,757	7,819	7,157	14,976

TENTH ANNUAL REPORT OF THE
Statistics of State Hospital System

TABLE No. 15.

Showing alleged duration of insanity previous to admission of patients
admitted during the year ending September 30, 1898.

DURATION OF INSANITY.	Men.	Women.	Total.
Under one month.....	488	439	927
One to three months.....	403	403	806
Three to six months.....	213	234	447
Six to nine months.....	137	169	306
Nine months to one year.....	100	59	159
One year to eighteen months.....	153	156	309
Eighteen months to two years.....	100	41	141
Two to three years.....	138	138	276
Three to four years.....	62	102	164
Four to five years.....	74	71	145
Five to ten years.....	143	241	384
Ten to fifteen years.....	92	107	199
Fifteen to twenty years.....	59	39	98
Twenty to thirty years.....	35	58	93
Thirty years and upwards.....	19	29	48
Not insane*.....	23	20	43
Unascertained.....	525	472	997
Total.....	2,764	2,778	5,542

TABLE No. 16.

Showing period of residence in asylum of patients remaining under
treatment September 30, 1898.

PERIOD OF RESIDENCE.	Men.	Women.	Total.
Under one month.....	207	140	347
One to three months.....	362	321	683
Three to six months.....	530	722	1,252
Six to nine months.....	353	367	720
Nine months to one year.....	540	559	1,099
One year to eighteen months.....	599	591	1,190
Eighteen months to two years.....	408	410	818
Two to three years.....	932	1,229	2,161
Three to four years.....	880	879	1,759
Four to five years.....	796	857	1,653
Five to ten years.....	2,304	2,506	4,810
Ten to fifteen years.....	1,011	1,100	2,111
Fifteen to twenty years.....	467	569	1,036
Twenty to thirty years.....	464	605	1,069
Thirty years and upwards.....	32	104	136
Not insane*.....	1	.....	1
Total.....	9,886	10,959	20,845

*Includes cases of alcoholism, morphia habit, etc.

Statistics of State Hospital System

OCCUPATION.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1898.		
	Men.	Women.	Total.	Men.	Women.	Total.
Professional:						
Clergy, military and naval officers, physicians, lawyers, architects, artists, authors, civil engineers, surveyors, etc.	111	8	119	858	73	931
Commercial:						
Bankers, merchants, accountants, clerks, salesmen, shopkeepers, shopmen stenographers, typewriters, etc.	421	5	426	3,546	27	3,573
Agricultural and pastoral:						
Farmers, gardeners, herdsmen, etc.	383	1	384	3,108	8	3,116
Mechanics at outdoor vocations:						
Blacksmiths, carpenters, enginefitters, sawyers, painters, police, etc.	478	.....	478	4,476	.....	4,476
Mechanics, etc., at sedentary vocations:						
Bootmakers, bookbinders, compositors, weavers tailors, hakers, etc.	370	.....	370	3,500	9	3,509
Domestic service						
Waiters, cooks, servants, etc.	78	1,002	1,080	983	9,288	10,170
Educational and higher domestic duties:						
Governesses, teachers, students, housekeepers, nurses, etc.	29	1,219	1,248	242	9,835	10,077
Commercial						
Shopkeepers, saleswomen, stenographers, typewriters, etc.	.....	31	31	16	288	304
Employed in sedentary occupations:						
Tailor-makes, seamstresses, bookbinders, factory workers, etc.	13	224	237	117	1,696	1,813
Miners, seamen, etc.	36	.....	36	145	.....	145
Prostitutes.	.....	5	5	.....	37	37
Labors						
.....	655	.....	655	6,028	.....	6,028
No occupation						
.....	148	240	388	1,370	2,037	3,407
Unascertained						
.....	42	43	85	527	474	1,001
Total	2,764	2,778	5,542	24,815	23,772	48,587

TABLE No. 17.

Showing the occupation of those admitted during the current year and since October 1, 1898.

TABLE No. 18.

Showing the nativity of patients admitted during the current year and since October 1, 1888.

NATIVITY.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Total admissions.....	2,764	2,778	5,542	24,815	23,772	48,587
Total born in United States.....	1,447	1,326	2,773	13,500	11,336	24,836
Africa.....	2	1	3	7	1	8
Algeria.....				3		3
Arabia.....				3		3
Asia.....						
Australia.....				3	1	4
Austria-Hungary.....	53	67	120	409	440	849
Azores.....					1	1
Babama Islands.....				1		1
Barbados.....				2		2
Belgium.....	1		1	19	6	25
Born at sea.....				1	1	2
Brazil.....					1	1
British India.....						
Canada.....	56	56	112	485	473	958
Canary Islands.....				1		1
China.....	4		4	39		39
Corsica.....				1		1
Cuba.....	2	1	3	10	11	21
Denmark.....	8	2	10	55	33	88
Egypt.....				1		1
England.....	85	72	157	831	712	1,543
France.....	25	27	52	224	153	382
Germany.....	352	328	680	3,047	2,798	5,845
Greece.....	3		3	10	1	11

Statistics of State Hospital System

Holland	7	6	13	49	38	87
Iceland	.....	.....	.....	1	1	2
India	1	.....	1	4	3	7
Indian (American)	1	.....	1	4	2	6
Ireland	352	619	971	3,600	5,659	9,259
Isle of Man	.....	.....	.....	.....	1	1
Italy	63	25	88	423	213	636
Jamaica	.....	.....	.....	.....	1	1
Japan	1	1	2	8	1	9
Madeira	.....	.....	.....	.....	1	1
Malta	2	.....	2	.....	1	6
Mexico	.....	.....	.....	5	1	6
New Brunswick	.....	.....	.....	5	1	6
Newfoundland	1	.....	1	2	2	4
New Zealand	.....	.....	.....	2	4	6
Norway	12	12	.....	1	.....	1
Nova Scotia	2	2	24	84	44	128
Other British possessions	.....	.....	4	10	4	14
Panama	.....	.....	.....	12	.....	12
Philippine Islands	.....	.....	.....	.....	.....	.....
Poland	16	13	.....	2	.....	2
Roumania	5	4	29	100	105	205
Russia	77	74	9	14	23	37
Scotland	22	21	151	550	545	1,095
Sicily	.....	.....	43	208	195	403
South America	2	1	.....	1	.....	1
Spain	2	.....	3	7	1	8
Sweden	31	29	2	19	2	21
Switzerland	13	14	60	225	248	473
Turkey	1	2	27	131	104	235
Wales	2	2	3	17	6	23
West Indies	5	1	4	39	16	55
United States of Colombia	.....	.....	6	45	55	100
Unascertained	108	72	180	595	2	2
					521	1,116

TENTH ANNUAL REPORT OF THE

Statistics of State Hospital System

COUNTIES.	UTICA STATE HOSPITAL			WILLARD STATE HOSPITAL			HUDSON RIVER STATE HOSPITAL			MIDDLETOWN STATE HOSPITAL			BUFFALO STATE HOSPITAL			BINGHAMTON STATE HOSPITAL		
	Public.	Private	Total.	Public	Private	Total.	Public	Private	Total.	Public	Private	Total.	Public	Private	Total.	Public	Private	Total.
Albany	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allegany
Brockport
Cattaraugus
Cayuga
Chemung
Chenango
Clinton
Columbia
Cortland
Delaware
Dutchess
Essex
Franklin
Fulton
Genesee
Greene
Hamilton
Herkimer
Jefferson
King
Lewis
Livestock
Madison
Montgomery
New York
Niagara
Oneida
Ontario
Orange
Orleans
Oswego
Otsego
Putnam
TOTAL

TABLE No. 19.

Showing the residence by counties and classification of patients admitted during the year ending September 30, 1898.

Statistics of State Hospital System

Queens	1	65	35	13	11	90	3	101	5,406	106	5,849
Hennepin	1	1	1	1	1	1	1	1	1	1	1
Richmond	1	1	1	1	1	1	1	1	1	1	1
Roxbury	1	1	1	1	1	1	1	1	1	1	1
St. Lawrence	1	1	1	1	1	1	1	1	1	1	1
Saratoga	1	1	1	1	1	1	1	1	1	1	1
Schenectady	1	1	1	1	1	1	1	1	1	1	1
Schoharie	1	1	1	1	1	1	1	1	1	1	1
Schuyler	1	1	1	1	1	1	1	1	1	1	1
Seneca	1	1	1	1	1	1	1	1	1	1	1
Steuben	1	1	1	1	1	1	1	1	1	1	1
Suffolk	1	1	1	1	1	1	1	1	1	1	1
Sullivan	1	1	1	1	1	1	1	1	1	1	1
Tioga	1	1	1	1	1	1	1	1	1	1	1
Tompkins	1	1	1	1	1	1	1	1	1	1	1
Ulster	1	1	1	1	1	1	1	1	1	1	1
Warren	1	1	1	1	1	1	1	1	1	1	1
Washington	1	1	1	1	1	1	1	1	1	1	1
Wayne	1	1	1	1	1	1	1	1	1	1	1
Westchester	1	1	1	1	1	1	1	1	1	1	1
Wyoming	1	1	1	1	1	1	1	1	1	1	1
Yates	1	1	1	1	1	1	1	1	1	1	1
Soldiers' Home	1	1	1	1	1	1	1	1	1	1	1
TOTAL	276	18	280	181	164	688	688	1,673	1,573	90	3

Statistics of State Hospital System

Oswego	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Statistical of State Hospital System

TABLE No. 20 — (Continued).
Showing the residence and classification of patients remaining under treatment September 30, 1898.

COUNTIES.	MIDDTOWN HOMEOPATHIC STATE HOSPITAL.				BUFFALO STATE HOSPITAL.				BINGHAMTON STATE HOSPITAL.			
	PUBLIC.		PRIVATE.		PUBLIC.		PRIVATE.		PUBLIC.		PRIVATE.	
	Men.	Women.	Total.	Total.	Men.	Women.	Total.	Total.	Men.	Women.	Total.	Total.
Albany	8	8	16		2	10	12	10	30	22	52	52
Allegany						4	6	2	1	1	2	1
Broome	1		1						30	36	66	1
Cattaraugus					1	56	57	1				
Cayuga	2	1	3									
Chautauque					57	85	142	4	23	27	50	50
Chemung	1	1	2						36	49	85	1
Chenango												
Columbia									1	1	2	2
Cortland												
Delaware	2	18	20						27	36	63	1
Dutchess	1		1						35	80	115	1
Erle	1		1		44	501	545	7	2	11	14	
Essex												
Franklin												
Fulton	1	1	2						7	6	13	
Genesee		1	1		3	19	22		9	20	29	
Greene		2	2									
Hamilton									1	1	2	
Herkimer												
Jefferson	1	24	25						60	2	62	1
Kings												
Lewis												
Livingston	1	2	3		1	2	3	1	26	21	47	
Madison		3	3		2	8	10	1	9	4	13	
Montgomery	1	44	45									
New York	83	77	160		74	77	151					
Niagara												
Oneida	1	1	2									
Ontario	1	3	4						13		13	
Oranget	145	180	325		17	20	37		7	12	19	

STATE COMMISSION IN LUNACY

471

Statistics of State Hospital System

County	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	Total
Orleans	1	1	1	1	1	1	1	1	1	1	1	1	1
Oswego	1	1	1	1	1	1	1	1	1	1	1	1	1
Ozark	1	1	1	1	1	1	1	1	1	1	1	1	1
Putnam	1	1	1	1	1	1	1	1	1	1	1	1	1
Queens	1	1	1	1	1	1	1	1	1	1	1	1	1
Rensselaer	1	1	1	1	1	1	1	1	1	1	1	1	1
Richmond	1	1	1	1	1	1	1	1	1	1	1	1	1
Rockland	1	1	1	1	1	1	1	1	1	1	1	1	1
St. Lawrence	1	1	1	1	1	1	1	1	1	1	1	1	1
Saratoga	1	1	1	1	1	1	1	1	1	1	1	1	1
Schenectady	1	1	1	1	1	1	1	1	1	1	1	1	1
Schoharie	1	1	1	1	1	1	1	1	1	1	1	1	1
Schuyler	1	1	1	1	1	1	1	1	1	1	1	1	1
Seneca	1	1	1	1	1	1	1	1	1	1	1	1	1
Stetson	1	1	1	1	1	1	1	1	1	1	1	1	1
Ulster	1	1	1	1	1	1	1	1	1	1	1	1	1
Warren	1	1	1	1	1	1	1	1	1	1	1	1	1
Washington	1	1	1	1	1	1	1	1	1	1	1	1	1
Wayne	1	1	1	1	1	1	1	1	1	1	1	1	1
Westchester	1	1	1	1	1	1	1	1	1	1	1	1	1
Wyoming	1	1	1	1	1	1	1	1	1	1	1	1	1
Yates	1	1	1	1	1	1	1	1	1	1	1	1	1
Soldiers' Home	1	1	1	1	1	1	1	1	1	1	1	1	1
Unascertained	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	477	513	560	604	654	704	754	804	854	904	954	1,004	1,054

Statistics of State Hospital System

COUNTIES.	MANHATTAN STATE HOSPITAL.						COLLINS STATE HOMOPATHIC HOSPITAL.						TOTAL, ALL HOSPITALS.					
	PUBLIC.			PRIVATE.			PUBLIC.			PRIVATE.			PUBLIC.			PRIVATE.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Albany							281	923	604				281	923	604			
Allgany							44	41	85				44	41	85			
Breome							90	93	183				90	93	183			
Cattaraugus							51	58	109				51	58	109			
Cayuga							102	82	184				102	82	184			
Chautauque							79	88	167				79	88	167			
Chemung							76	73	149				76	73	149			
Chemung							37	51	88				37	51	88			
Clinton							40	43	83				40	43	83			
Columbia							54	63	119				54	63	119			
Cortland							37	38	75				37	38	75			
Delaware							37	70	107				37	70	107			
Dutchess							167	162	329				167	162	329			
Erie							507	513	1,020				507	513	1,020			
Essex							28	20	48				28	20	48			
Franklin							34	36	70				34	36	70			
Fulton							50	54	104				50	54	104			
Greene							42	43	85				42	43	85			
Hamilton							38	44	82				38	44	82			
Herkimer							6	8	14				6	8	14			
Jefferson							39	58	97				39	58	97			
King							66	78	143				66	78	143			
Lewis							1,304	1,568	2,872				1,304	1,568	2,872			
Livingston							46	30	76				46	30	76			
Madison							40	34	74				40	34	74			
Monroe							48	50	98				48	50	98			
Montgomery							275	296	571				275	296	571			
New York							58	55	113				58	55	113			
Niagara							2,478	3,611	6,089				2,478	3,611	6,089			
Oneida							132	86	218				132	86	218			
Ontario							194	206	400				194	206	400			
Orange							193	206	399				193	206	399			
Oryana							66	83	149				66	83	149			
							161	156	317				161	156	317			
							26	23	49				26	23	49			

TABLE 20.—(Concluded).

Showing the residence and classification of patients remaining under treatment, September 30, 1898.

Licensed Private Asylum System

(B) LICENSED PRIVATE ASYLUM SYSTEM.
General statistics for year ending September 30, 1898.

INSTITUTIONS.	REMAINING OCTOBER 1, 1897.			ADMITTED DURING YEAR ENDING SEPTEMBER 30, 1898.			TOTAL IN CARE DURING YEAR ENDING SEPTEMBER 30, 1898.			REMAINING OCTOBER 1, 1898.			INCREASE OR DECREASE.	
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Increase.	Decrease.
Bloomington Asylum	146	183	329	52	63	115	198	246	444	143	191	334	5	.....
Providence Retreat	31	81	112	27	36	63	58	117	175	31	82	113	1	.....
Marshall Infirmary	22	23	45	25	19	44	47	42	89	26	23	49	4	.....
Long Island Home	46	51	97	27	28	55	73	79	152	43	51	94	.....	3
Brigham Hall	27	31	58	9	10	19	36	41	77	27	27	54	.....	4
St. Vincent's Retreat	.....	61	61	.....	26	26	.....	87	87	.....	60	60	.....	1
Sanford Hall	14	16	30	10	9	19	24	25	49	13	16	29	.....	1
Dr. Wells' Sanitarium	.....	15	15	.....	5	5	.....	20	20	.....	15	15	.....	.....
Dr. Combes' Sanitarium	.....	.....	.....	1	.....	1	1	.....	1	1	.....	1	1	.....
Dr. MacDonald's House	1	5	6	.....	1	1	1	6	7	.....	6	6	.....	.....
Dr. Parsons' Retreat	1	3	4	.....	1	1	1	4	5	.....	3	4	.....	.....
Glenmary	4	15	19	11	10	21	15	25	40	9	17	26	7	.....
Falkirk	3	5	8	6	3	9	9	8	17	5	7	12	4	.....
Vernon House	3	3	6	5	2	7	8	5	18	4	1	5	.....	1
Breezehurst Terrace	14	7	21	8	5	13	17	13	30	10	10	20	.....	1
Waldemere	6	3	9	6	1	7	12	4	16	8	1	9	.....	.....
The Pines	.....	4	4	2	4	6	2	9	11	1	3	4	.....	.....
Interplines	.....	3	3	.....	2	2	.....	5	5	.....	4	4	.....	.....
River Crest	8	4	12	23	26	49	31	30	61	8	8	16	4	.....
Total	326	513	839	207	251	458	533	766	1,299	380	525	855	27	11

Statistics of Criminal Insane

MATTEAWAN STATE HOSPITAL FOR INSANE
CRIMINALS

(C)

TABLE No. 1.

Showing Movement of Population for the Year Ending September 30,
1898.

	Men.	Women.	Total.
Remaining October 1, 1897.....	587	45	632
Admitted during year ending September 30, 1898:			
On original commitments from courts and penal institutions.....	119	10	129
By transfers from other institutions for insane.	5	.....	5
Total number under treatment during year....	711	55	766
Daily average population.....	.....	.....	661.36
Capacity of institution	470	80	550
Discharged during the year:			
As recovered.....	18	1	19
As improved.....	25	4	29
As unimproved.....	6	.....	6
Died	24	2	26
Whole number discharged during the year.....	73	7	80
Remaining October 1, 1898	638	48	686

Statistics of Criminal Insane

TABLE No. 2.

October 1, 1897, to September 30, 1898.

Date of opening, February 2, 1859, at Auburn; April 25, 1892, at Matteawan.

Total acreage of grounds and buildings	245
Value of real estate, including buildings	\$875,000 00
Value of personal property	55,387 00
Acreage under cultivation	195

Receipts during the year:

Balance on hand October 1, 1897	\$101 58
From State Treasury for maintenance on estimates 1 to 12 inclusive	65,000 00
From all other sources	61,178 39
Total receipts for maintenance	\$126,279 97

Disbursements during year for maintenance:

Estimate No. 1. For officers' salaries	\$10,177 67
Estimate No. 2. For wages	41,668 84
Estimate No. 3. For provisions and stores	39,779 54
Estimate No. 4. For ordinary repairs	2,923 49
Estimate No. 5. For farm and grounds	2,129 13
Estimate No. 6. For clothing and bedding	5,814 03
Estimate No. 7. For furniture	1,192 96
Estimate No. 8. For books and stationery	971 61
Estimate No. 9. For fuel and light	11,048 78
Estimate No. 10. For medical supplies	1,241 85
Estimate No. 11. For miscellaneous expenses	5,240 24
Estimate No. 12. For transportation and discharged patients	234 47

Total disbursements, estimates 1 to 12 inclusive \$122,422 61

Balances October 1, 1898:

General maintenance fund	\$3,857 36
Weekly per capita cost on daily average number of patients, estimates 1 to 12 inclusive	3 55

Statistics of Criminal Insane

Table No. 2—(Concluded).

Maximum rate of wages paid attendants:	
Men	\$34 per month
Women	25 per month
Minimum rate of wages paid attendants:	
Men	18 per month
Women	15 per month
Proportion of day attendants to average daily population	1-8.9
Proportion of night attendants to average daily population	1-34
Percentage of daily patient population engaged in some kind of useful occupation	42
Estimated value of farm and garden products during year	\$7,883 30
Estimated value of articles made or manufactured by patients during year	4,374 04

Statistics of Criminal Insane

TABLE No. 3.

Showing the Assigned Causes of Insanity in Cases Admitted During the Current Year.

CAUSES.	YEAR ENDING SEPTEMBER 30, 1898.			INHERITED PREDISPOSI- TION.			Unascertained.
	Men.	Women.	Total.	Men.	Women.	Total.	
MORAL:							
Adverse conditions (such as loss of friends, business troubles, etc).....	1	1	2	.....	.....	.....	2
Mental strain, worry and overwork (not included in above)	15	.....	15	4	.....	4	11
PHYSICAL:							
Intemperance	10	1	11	3	1	4	7
Venereal diseases...	3	1	4	.....	.....	.....	4
Masturbation	9	1	10	4	.....	4	6
Accident or injury..	4	.....	4	.....	.....	.....	4
Fevers	1	.....	1	1	.....	1	....
Epilepsy	4	1	5	1	.....	1	4
Abuse of drugs.....	3	.....	3	2	.....	2	1
All other bodily dis- orders and ill health	8	.....	8	3	.....	3	5
Heredity	9	2	11	9	2	11	....
Congenital defect.....	6	2	8	6	2	8	....
Unascertained	51	1	52	91	5	96	....
Total	124	10	134	124	10	134	44

Statistics of Criminal Insane

TABLE No. 4.

Showing Forms of Insanity in Those Admitted, Recovered and Died During the Year Ending September 30, 1898, and Since October 1, 1888.

FORM.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Admitted.	Recovered.	Died.	Admitted.	Recovered.	Died.
Mania, acute delirious	17	.....	.....	65	25	6
Mania, acute.....	23	9	4	162	37	9
Mania, recurrent	1	.....	.....	18	3	2
Mania, chronic.....	7	1	5	103	19	29
Melancholia, acute.....	22	1	3	174	86	21
Melancholia, simple.....	28	7	2	293	86	13
Melancholia, chronic	1	.....	.....	31	2	13
Alternating (circular) insanity .....	.....	.....	.....	.....	1	.....
Paranoia .....	.....	.....	.....	.....	.....	.....
General paralysis.....	4	.....	4	41	.....	36
Dementia, primary	16	1	1	96	8	7
Dementia, terminal	4	.....	6	66	.....	28
Epilepsy with insanity	5	.....	.....	41	4	5
Imbecility with maniacal at- tacks	6	.....	1	53	3	4
Idiocy .....	.....	.....	.....	.....	.....	.....
Not insane* .....	.....	.....	.....	.....	1	.....
Total	134	19	26	1,143	275	173

* Includes cases of alcoholism, drug habit, etc.

TABLE No. 6.
Showing the Duration of Insanity Previous to Admission, and the Period under Treatment of Patients discharged Recovered During the Current Year and Since October 1, 1888.

	YEAR ENDING SEPTEMBER 30, 1898.						SINCE OCTOBER 1, 1888.					
	DURATION PREVIOUS TO ADMISSION.			PERIOD UNDER TREATMENT.			DURATION PREVIOUS TO ADMISSION.			PERIOD UNDER TREATMENT.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Under one month	6	.....	6	.....	.....	.....	85	1	86	.....	1	1
One to three months.....	6	.....	6	.....	.....	.....	40	.....	40	11	1	12
Three to six months.....	1	.....	1	1	.....	1	20	2	22	35	.....	35
Six to nine months.....	.....	.....	.....	4	.....	4	10	.....	10	49	1	50
Nine months to one year.....	.....	.....	.....	1	.....	1	3	1	4	32	2	34
One year to eighteen months..	.....	.....	.....	5	.....	5	4	.....	4	48	3	51
Eighteen months to two years	.....	.....	.....	3	.....	3	1	.....	1	35	.....	35
Two to three years.....	.....	1	1	1	.....	1	4	1	5	28	.....	28
Three to four years.....	.....	.....	.....	2	.....	2	.....	.....	.....	14	.....	14
Four to five years.....	.....	.....	.....	1	1	2	2	1	3	6	2	8
Five to ten years .....	.....	.....	.....	.....	.....	.....	1	.....	1	7	.....	7
Not insane* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unascertained	5	.....	5	.....	.....	.....	95	4	99	.....	.....	.....
Total.	18	1	19	18	1	19	265	10	275	265	10	275

*Includes cases of alcoholism, opium habit, etc.

Statistics of Criminal Insane

TABLE No. 7.

Showing the Causes of Death of Patients who Died During the Current Year and Since October 1, 1888.

CAUSE OF DEATH.	YEAR ENDING SEP- TEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Specific infectious diseases :						
Dysentery.....	....	1	1	1	1	2
Tuberculosis.....	14	....	14	66	1	67
Constitutional diseases :						
Diabetes mellitus and diabetes insipidus .....	....	....	....	2	....	2
Diseases of digestive system :						
Diseases of the stomach.....	1	....	1	4	....	4
Diseases of the liver .....	....	....	....	3	....	3
Diseases of the peritoneum	1	....	1	4	....	4
Diseases of the respiratory system :						
Diseases of the bronchi .....	....	....	....	3	....	3
Diseases of the circulatory system :						
Diseases of the heart.....	1	....	1	9	....	9
Aneurism .....	....	....	....	1	....	1
Diseases of the blood and ductless glands :						
Diseases of the genito-urinary sys- tem .....	....	....	....	8	1	9
Diseases of the nervous system :						
Diseases of the meninges .....	....	....	....	2	....	2
Organic diseases of the brain (tumor, abscess, embolism, throm- bosis, hemorrhage and other gross lesions) .....	....	....	....	5	2	7
Epilepsy .....	....	....	....	2	1	3
Mental diseases :						
Exhaustion of chronic mental dis- ease .....	....	....	....	4	1	5
General paralysis of the insane ..	4	1	5	36	1	37
Debility of old age	3	....	3	6	....	6
Suicide. ....	....	....	....	8	....	8
Malignant new growths of cancer.....	....	....	....	1	....	1
Total	24	2	26	165	8	173

Statistics of Criminal Insane

TABLE No. 8.

Showing Hereditary Tendency to Insanity in Patients Admitted During the Current Year and Since October 1, 1888.

	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Paternal branch	3	1	4	47	5	52
Maternal branch.....	2	1	3	64	5	69
Paternal and maternal branches .....	.....	.....	.....	12	.....	12
Collateral branches	4	.....	4	48	2	50
No hereditary tendency..	12	.....	12	151	13	164
Unascertained	103	8	111	774	39	813
Total	124	10	134	1,096	64	1,160

TABLE No. 9.

Showing Civil Condition of Patients Admitted During the Current Year and Since October 1, 1888.

CIVIL CONDITION.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Single.	84	5	89	758	22	780
Married	36	2	38	287	30	317
Widowed	4	3	7	40	9	49
Divorced .....	.....	.....	.....	2	.....	2
Unascertained .....	.....	.....	.....	9	3	12
Total	124	10	134	1,096	64	1,160

Statistics of Criminal Insane

TABLE No. 10.

Showing Degree of Education of Patients Admitted During the Current Year and Since October 1, 1888.

DEGREE OF EDUCATION.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Collegiate	2	.....	2	11	8	14
Academic	3	.....	3	22	3	25
Common School.....	20	.....	20	327	23	350
Read and write.....	78	7	85	528	26	554
Read only.....	8	1	9	49	2	51
No education.....	12	2	14	135	7	142
Unascertained	1	.....	1	24	1	24
Total	124	10	134	1,096	64	1,160

TABLE No. 11.
Showing the Duration of Insanity Previous to Admission, and the Period Under Treatment of Patients who Died During the Current Year and Since October 1, 1888.

	YEAR ENDING SEPTEMBER 30, 1893.			SINCE OCTOBER 1, 1888.		
	DURATION PREVIOUS TO ADMISSION.		PERIOD UNDER TREATMENT.	DURATION PREVIOUS TO ADMISSION.		PERIOD UNDER TREATMENT.
	Men.	Women.		Men.	Women.	
Under one month.....	2	.....	2	.....	.....	9
One to three months.....	4	.....	4	2	1	12
Three to six months.....	3	1	4	2	.....	9
Six to nine months.....	.....	.....	.....	.....	.....	12
Nine months to one year.....	2	.....	2	4	.....	8
One year to eighteen months.	2	.....	2	.....	.....	13
Eighteen months to two years.	.....	.....	.....	.....	.....	8
Two to three years.....	1	.....	1	.....	1	23
Three to four years.....	.....	.....	.....	2	.....	17
Four to six years.....	.....	.....	.....	5	.....	20
Six to ten years.....	2	.....	2	5	.....	10
Ten to twenty years.....	1	.....	1	2	.....	14
Twenty years and over.....	1	.....	1	.....	.....	10
Not insane*	.....	.....	.....	.....	.....	.....
Unascertained.....	6	1	7	.....	5	.....
Total.....	24	2	26	24	8	165
Average duration of insane life (give years and tenths).....				8.5+		8.2

* Includes cases of alcoholism, drug habit, etc.

Statistics of Criminal Insane

TABLE No. 12.

Showing Ages of those Admitted During the Current Year and Since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From 10 to 15 years.....	.....	.....	.....	1	.....	1
From 15 to 20 years.....	9	1	10	69	2	71
From 20 to 25 years.....	32	3	35	158	11	169
From 25 to 30 years.....	31	3	34	338	13	351
From 30 to 35 years.....	18	.....	18	117	10	127
From 35 to 40 years.....	12	1	13	191	12	203
From 40 to 50 years.....	13	2	15	142	9	151
From 50 to 60 years.....	5	.....	5	59	6	65
From 60 to 70 years.....	2	.....	2	18	1	19
From 70 to 80 years.....	1	.....	1	2	.....	2
Unascertained	1	.....	1	1	.....	1
Total	124	10	134	1,096	64	1,160

TABLE No. 13.

Showing Ages of those Discharged Recovered During the Current Year and Since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From 10 to 20 years.....	.....	.....	.....	9	.....	9
From 20 to 30 years....	6	1	7	147	3	150
From 30 to 40 years.....	9	.....	9	82	4	86
From 40 to 50 years.....	2	.....	2	18	2	20
From 50 to 60 years.....	1	.....	1	8	1	9
From 60 to 70 years .....	.....	.....	.....	2	.....	2
From 70 to 80 years.....	.....	.....	.....	1	.....	1
Total	18	1	19	267	10	277

Statistics of Criminal Insane

TABLE No. 14.

Showing Ages of Patients who Died During the Current Year and
Since October 1, 1888.

AGE.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
From 15 to 20 years	2	.....	2	2	.....	2
From 20 to 25 years	2	1	3	11	2	13
From 25 to 30 years	4	1	5	28	2	30
From 30 to 35 years	4	.....	4	23	1	24
From 35 to 40 years	2	.....	2	22	.....	22
From 40 to 50 years	4	.....	4	33	2	35
From 50 to 60 years	2	.....	2	18	.....	18
From 60 to 70 years	1	.....	1	13	1	14
From 70 to 80 years	2	.....	2	10	.....	10
From 80 to 90 years	1	.....	1	1	.....	1
Over 90 years .....	.....	.....	.....	1	.....	1
Total	24	2	26	162	8	170

Statistics of Criminal Insane

TABLE No. 15.

Showing Alleged Duration of Insanity Previous to Admission of Patients Admitted During the Year Ending September 30, 1898.

DURATION OF INSANITY.	Men.	Women.	Total.
Under one month.....	22	1	23.
One to three months.....	39	.....	39.
Three to six months.....	25	.....	25
Six to nine months.....	9	.....	9.
Nine months to one year.....	.....	1	1
One year to eighteen months.....	5	.....	5.
Four to five years.....	1	.....	1.
Five to ten years.....	1	.....	1.
Ten to fifteen years.....	2	1	3.
Fifteen to twenty years.....	1	.....	1
Twenty to thirty years.....	1	.....	1
Unascertained.....	18	7	25.
Total.....	124	10	134

TABLE No. 16.

Showing Period of Residence in Asylum of Patients Remaining Under Treatment September 30, 1898.

PERIOD OF RESIDENCE.	Men.	Women.	Total.
Under one month.....	12	.....	12.
One to three months.....	16	3	19.
Three to six months.....	30	2	32
Six to nine months.....	36	3	39
Nine months to one year.....	18	.....	18
One year to eighteen months.....	61	3	64
Eighteen months to two years.....	46	3	49.
Two to three years.....	68	3	71
Three to four years.....	62	2	64
Four to five years.....	46	9	55
Five to ten years.....	169	10	179
Ten to fifteen years.....	48	6	54
Fifteen to twenty years.....	9	.....	9
Twenty to thirty years.....	15	4	19
Thirty years and upwards.....	2	.....	2
Total.....	638	48	686

Statistics of Criminal Insane

TABLE No. 17.

Showing the Occupation of Those Admitted During the Current Year
and Since October 1, 1888.

OCCUPATION.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Professional :						
Clergy, military and naval officers, physicians, law- yers, architects, artists, authors, civil engineers, surveyors, etc	3	.....	3	20	.....	20
Commercial :						
Bankers, merchants, ac- countants, clerks, sales- men, shopkeepers, shop- men, stenographers, type- writers, etc	10	.....	10	76	.....	76
Agricultural and Pas- toral :						
Farmers, gardeners, herds- men, etc	8	.....	8	72	.....	72
Mechanics, at out-door vocations :						
Blacksmiths, carpenters, engine-fitters, sawyers, painters, police, etc	30	.....	30	269	1	210
Mechanics, etc., at sedentary vocations :						
Bootmakers, bookbinders, compositors, weavers, tailors, bakers, etc	17	.....	17	245	2	247
Domestic service :						
Waiters, cooks, servants, etc	9	5	14	54	40	94
Educational and higher domestic duties :						
Governesses, teachers, stu- dents, housekeepers, nurses, etc	1	4	5	9	9	18
Commercial :						
Shopkeepers, saleswomen, stenographers, typewrit- ers, etc . . . . .	.....	.....	.....	10	.....	10

Statistics of Criminal Insane

TABLE No. 17—(Concluded).

OCCUPATION.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Employed in seden- tary occupations:						
Tailoresses, seamstresses, bookbinders, factory workers, etc		1	1	1	9	10
Miners, seamen, etc	4	.....	4	44	.....	44
Laborers	40	.....	40	307	.....	307
No occupation	2	.....	2	37	3	40
Unascertained . . . . .	.....	.....	.....	12	.....	12
Total	124	10	134	1,096	64	1,160

Statistics of Criminal Insane

TABLE No. 18.

Showing the Nativity of Patients Admitted During the Current Year
and Since October 1, 1888.

NATIVITY.	YEAR ENDING SEPTEMBER 30, 1898.			SINCE OCTOBER 1, 1888.		
	Men.	Women.	Total.	Men.	Women.	Total.
Algiers.....				3		3
Austria.....	3		3	9		9
Australia.....				2		2
British India.....				1		1
Bohemia.....				1		1
Canada.....	3	1	4	25	1	26
China.....				3		3
Cuba.....				2		2
England.....	3		3	37		37
France.....				6	1	7
Germany.....	15	1	16	98	2	100
Greece.....				2		2
Holland.....				5		5
Ireland.....	9	1	10	89	18	107
Italy.....	11		11	65	1	66
Malta.....				1		1
Persia.....				1		1
Poland.....		1	1	8	2	10
Russia.....	4		4	19		19
Scotland.....	1		1	5		5
Sicily.....				1		1
Sweden.....				5		5
Switzerland.....				3		3
United States.....	74	5	79	668	37	705
West Indies.....	1	1	2	4	1	5
Unascertained.....				33	1	34
Total.....	124	10	134	1,098	64	1,160

Of the total number admitted since the 1st of October, 1888, the parents of 54.61 per cent. were both of foreign birth.

In 4.07 per cent. the parentage on the paternal side was foreign, while that on the maternal side was native.

In 5.55 per cent. the parentage on the maternal side was foreign, while that on the paternal side was native.

Statistics of Criminal Insane

TABLE No. 19.

Showing the Residence by Counties and Classification of Patients Admitted During the Year Ending September 30, 1898.

COUNTIES.	Public.	Private.	Total.
Albany.....	2	.....	2
Allegany.....	1	.....	1
Broome.....	.....	.....	.....
Cattaraugus.....	.....	.....	.....
Cayuga.....	.....	.....	.....
Chautauqua.....	1	.....	1
Chemung.....	.....	.....	.....
Chenango.....	.....	.....	.....
Clinton.....	.....	.....	.....
Columbia.....	1	.....	1
Cortland.....	1	.....	1
Delaware.....	.....	.....	.....
Dutchess.....	3	.....	3
Erie.....	6	.....	6
Essex.....	.....	.....	.....
Franklin.....	.....	.....	.....
Fulton.....	.....	.....	.....
Genesee.....	1	.....	1
Greene.....	.....	.....	.....
Hamilton.....	.....	.....	.....
Herkimer.....	2	.....	2
Jefferson.....	2	.....	2
Kings.....	21	.....	21
Lewis.....	.....	.....	.....
Livingston.....	.....	.....	.....
Madison.....	1	.....	1
Monroe.....	7	.....	7
Montgomery.....	1	.....	1
New York.....	50	.....	50
Niagara.....	2	.....	2
Oneida.....	4	.....	4
Onondaga.....	5	.....	5
Ontario.....	.....	.....	.....
Orange.....	1	.....	1
Orleans.....	.....	.....	.....
Oswego.....	1	.....	1
Otsego.....	.....	.....	.....
Putnam.....	.....	.....	.....
Queens.....	2	.....	2
Rensselaer.....	2	.....	2
Richmond.....	3	.....	3
Rockland.....	1	.....	1
St. Lawrence.....	1	.....	1

Statistics of Criminal Insane

TABLE No. 19—(Concluded).

COUNTIES.	Public.	Private.	Total.
Saratoga	1	.....	1
Schenectady .....	.....	.....	.....
Schoharie .....	.....	.....	.....
Schuyler	1	.....	1
Seneca .....	.....	.....	.....
Steuben	2	.....	2
Suffolk	1	.....	1
Sullivan .....	.....	.....	.....
Tioga .....	.....	.....	.....
Tompkins	1	.....	1
Ulster .....	.....	.....	.....
Warren .....	.....	.....	.....
Washington .....	.....	.....	.....
Wayne	1	.....	1
Westchester	5	.....	5
Wyoming .....	.....	.....	.....
Yates .....	.....	.....	.....
Soldiers' Home .....	.....	.....	.....
Total	134	.....	134

Statistics of Criminal Insane

TABLE No. 20

Showing the Residence by Counties and Classification of Patients
Remaining Under Treatment September 30, 1898.

COUNTIES.	PUBLIC.		
	Men.	Women.	Total.
Albany	23	3	26
Allegany	1	.....	1
Broome	2	.....	2
Cattaraugus	5	.....	5
Cayuga	4	.....	4
Chautauqua	3	.....	3
Chemung	4	3	7
Chenango	3	.....	3
Clinton	1	1	2
Columbia	3	.....	3
Cortland	1	.....	1
Delaware	4	.....	4
Dutchess	9	.....	9
Erie	16	2	18
Essex	3	1	4
Franklin	2	.....	2
Genesee	1	.....	1
Greene	3	.....	3
Herkimer	3	1	4
Jefferson	9	.....	9
Kings	61	5	66
Lewis	2	.....	2
Madison	10	.....	10
Monroe	32	3	35
Montgomery	3	.....	3
New York	230	12	242
Niagara	7	.....	7
Oneida	13	3	16
Onondaga	24	5	29
Ontario	4	.....	4
Orange	3	.....	3
Orleans	1	.....	1
Oswego	7	1	8
Queens	18	.....	18
Rensselaer	11	1	12
Richmond	8	2	10
Rockland	3	.....	3
St. Lawrence	8	.....	8
Saratoga	6	.....	6
Schenectady	3	.....	3
Schoharie	2	.....	2

Statistics of Criminal Insane

TABLE No. 20—(Concluded).

COUNTIES.	PUBLIC.		
	Men.	Women.	Total.
Schuyler.....	4	.....	4
Seneca.....	2	.....	2
Steuben.....	6	.....	6
Suffolk.....	9	.....	9
Sullivan.....	1	1	2
Tioga.....	3	.....	3
Tompkins.....	.....	1	1
Ulster.....	7	.....	7
Warren.....	4	.....	4
Washington.....	8	.....	8
Wayne.....	3	.....	3
Westchester.....	34	3	37
Wyoming.....	1	.....	1
Total.....	638	48	686

PART V

Official Directory of State Hospitals and Private Institutions

CHAPTER 18

Official Directory of Hospitals and Private Institutions

(Form 105.)

STATE COMMISSION IN LUNACY.

COMMISSIONERS.

Peter M. Wise, M. D., President, 1 Madison Avenue, New York City. Telephone 1728 Eighteenth Street. Residence, No. 269 West Seventy-ninth Street. House Telephone 603 Riverside.

William Church Osborn, 71 Broadway, New York. Telephone 5449 Cortland.

William L. Parkhurst, Canandaigua, N. Y.

SECRETARY.

T. E. McGarr, Capitol, Albany. Residence, No. 37 Lake Avenue, Albany. Telephone 58 West. General office Telephone 1237.

Total number in State hospitals, 21,134; total number in private institutions, 906; total, 22,040.

STATE HOSPITAL SYSTEM.

ADMISSION OF PRIVATE PATIENTS TO STATE HOSPITALS.

Private patients can be admitted to State hospitals only upon consent of the medical superintendents. Rates for private patients range from six to ten dollars per week and a bond must be provided guaranteeing payment of accounts for maintenance.

Asylum Directory**UTICA STATE HOSPITAL—UTICA, ONEIDA COUNTY.**

Number of patients, men 534, women 560, total 1094; number employees, men 124, women 120, total 244.

G. Alder Blumer, M. D., Medical Superintendent.

Harold L. Palmer, M. D., First Assistant Physician.

Walter C. Gibson, M. D., Second Assistant Physician.

George H. Torney, Jr., M. D., Assistant Physician.

Edward G. Stout, M. D., Junior Physician.

William Moffatt, M. D., Medical Intern.

Clara Smith, M. D., Woman Physician.

W. Stuart Walcott, President Board of Managers, New York Mills, N. Y. Telephone, 604a.

C. A. Mosher, Steward.

Harry S. Patten, Treasurer, Utica.

James S. Sherman, Counsel, 343 Genesee Street, Utica. Telephone, No. 511.

One mile from the New York Central, the Rome, Watertown and Ogdensburg, the Delaware, Lackawanna and Western, and the Ontario and Western railway stations, and two miles from the West Shore station. Accessible every fifteen minutes by New York Mills or Whitesboro electric cars. Stop at Cross or junction of Whitesboro and Court streets.

GRAYCROFT, DIXHURST and CRAGSIDE, agricultural colonies, are situated about a mile and a half from the hospital. Accessible by special conveyance.

Hospital long-distance telephone No. 1545.

WILLARD STATE HOSPITAL—WILLARD, SENECA COUNTY.

Number patients, men 1,099, women 1,159, total 2,258; number employees, men 255, women 232, total 487.

Wm. Austin Macy, M. D., Medical Superintendent.

William L. Russell, M. D., First Assistant Physician.

Thomas J. Currie, M. D., Second Assistant Physician.

Robert E. Doran, M. D., Assistant Physician.

Asylum Directory

Charles F. Sanborn, M. D., Assistant Physician.

William Steinach, M. D., Assistant Physician.

John W. Russell, M. D., Assistant Physician.

Donald C. Ross, M. D., Junior Assistant Physician.

Anton R. Schier, M. D., Junior Assistant Physician.

Arthur P. Shellman, M. D., Junior Assistant Physician.

J. Ernestine Hills, M. D., Woman Assistant Physician.

Edwin G. Klein, M. D., Medical Interne.

Louis T. Waldo, M. D., Medical Interne.

Stephen H. Hammond, President Board of Managers, Geneva.

Local telephone 315.

M. J. Gilbert, Steward.

J. B. Thomas, Treasurer, Ovid, N. Y.

S. S. Partridge, Counsel, Phelps, N. Y. Local telephone.

Accessible, from the east, by New York Central and Hudson River railway (Auburn branch from Syracuse to Geneva); from the west, via New York Central and Hudson river railway, from Rochester (Auburn branch) to Geneva, or via Lehigh Valley railway; from the north, Lyons to Geneva via Fall Brook railway; from Geneva, via steamers of the Seneca Lake Steam Navigation company (in summer), and by Lehigh Valley railway; from the south, via Lehigh Valley railway or by Seneca Lake Steam Navigation company steamers (in summer).

This hospital is most conveniently reached via Hayt's Corners. A hotel is located near the hospital grounds.

Hospital long-distance telephone, Willard, N. Y.

Telegraph office at hospital.

**HUDSON RIVER STATE HOSPITAL—POUGHKEEPSIE,
DUTCHESS COUNTY.**

Number patients, men 998, women 1,044, total 2,042; number employees, men 255, women 195, total 450.

Charles W. Pilgrim, M. D., Medical Superintendent.

J. E. Courtney, M. D., First Assistant Physician.

Asylum Directory

Charles H. Langdon, M. D., Second Assistant Physician.

Isham G. Harris, M. D., Assistant Physician.

Thomas E. Bamford, M. D., Assistant Physician.

J. O. Stranahan, M. D., Junior Assistant Physician.

Frederick J. Mann, M. D., Junior Assistant Physician.

Fred T. Clark, M. D., Junior Assistant Physician.

Clarence J. Slocum, Junior Assistant Physician.

O. E. Stackhouse, Medical Interne.

Emma Putnam, M. D., Woman Assistant Physician.

Frank B. Lown, President Board of Managers. Address 54 Market street.

L. P. Gillespie, Steward.

Allison Butts, Treasurer, Poughkeepsie, N. Y. Telephone No. 21.

H. M. Taylor, Counsel. Address, 52 Market street, Poughkeepsie.

The hospital is located two miles north of the New York Central railway station at Poughkeepsie. Carriages may be procured at the station, and a public conveyance runs regularly to and from the hospital, connecting with the principal trains. The hospital may also be reached by the West Shore railway ferry from Highland station to Poughkeepsie, and by the Philadelphia, Reading and New England railway (Poughkeepsie Bridge route). Conveyances may be procured from Parker avenue station.

Hospital long-distance telephone No. 171.

Telegraph office at hospital.

MIDDLETOWN STATE HOMEOPATHIC HOSPITAL—MIDDLETOWN, ORANGE COUNTY.

Number patients, men 582, women 651, total 1,233; number employees, men 159, women 109, total 268.

Selden H. Talcott, M. D., Superintendent.

Charles S. Kinney, M. D., First Assistant Physician.

Maurice C. Ashley, M. D., Second Assistant Physician.

Arthur P. Powelson, M. D., Assistant Physician.

David E. Francisco, M. D., Assistant Physician.

Asylum Directory

Edward A. Everetts, Junior Assistant Physician.

Robt. C. Woodman, Junior Physician.

Clara Barrus, M. D., Woman Assistant Physician.

————— Medical Interne.

Grinnell Burt, President Board of Managers, Warwick, N. Y.
No telephone.

Henry J. Leonard, Steward.

Cornelius Macardell, Treasurer, Middletown, N. Y.

John B. Swezey, Counsel, Goshen. No telephone.

Middletown is 66 miles from New York city, and may be reached by the following railways: New York, Lake Erie and Western, New York, Ontario and Western, and New York Susquehanna and Western. Electric cars run between Middletown and the hospital. Public carriages may also be had at the station.

Hospital long-distance telephone No. 41.

BUFFALO STATE HOSPITAL—BUFFALO, ERIE COUNTY.

Number patients, men 767, women 950, total 1,717; number employees, men 166, women 170, total 336.

Arthur W. Hurd, M. D., Medical Superintendent.

Henry P. Frost, M. D., First Assistant Physician.

George G. Armstrong, M. D., Second Assistant Physician.

Walter H. Conley, M. D., Assistant Physician.

Joseph B. Betts, M. D., Assistant Physician.

Edwin A. Bowerman, M. D., Junior Assistant Physician.

C. J. Patterson, M. D., Junior Assistant Physician.

Edward G. Aldrich, M. D., Assistant Physician.

Helene Kuhlmann, M. D., Woman Assistant Physician.

William J. O'Donnell, Medical Interne.

Joseph P. Dudley, President Board of Managers. Address 19 East Swan street. Long-distance telephone "Bryant 216."

John E. Culp, Steward.

Elias S. Hawley, Treasurer, Buffalo, N. Y.

Asylum Directory

John E. Pound, Counsel, Lockport, N. Y. Address 71 Main street. Long-distance telephone "Lockport 231."

The hospital is located on Forest avenue, about three and one-half miles from the principal railway stations, accessible by Elmwood avenue, and Baynes and Hoyt streets trolley lines, direct; also by Main street and Niagara street lines by obtaining transfer to the Forest avenue cars.

Hospital long-distance telephone "Bryant 262."

BINGHAMTON STATE HOSPITAL—BINGHAMTON, BROOME COUNTY.

Number patients, men 613, women 736, total 1,349; number employees, men 180, women 150, total 330.

Charles G. Wagner, M. D., Medical Superintendent.

Charles C. Eastman, M. D., First Assistant Physician.

William A. White, M. D., Second Assistant Physician.

Arthur P. Summers, M. D., Assistant Physician.

Robert G. Wallace, M. D., Assistant Physician.

H. W. Eggleston, M. D., Junior Assistant Physician.

Cecil MacCoy, M. D., Junior Assistant Physician.

Edward Gillespie, M. D., Junior Assistant Physician.

Mary O'Malley, M. D., Woman Assistant Physician.

John B. Stanbrough, President Board of Managers. Address Owego, N. Y. No telephone.

Edwin Evans, Steward.

John Rankin, Treasurer, Binghamton, N. Y.

Geo. B. Curtiss, Counsel, Binghamton. Address Ross Building. No telephone.

Located on the lines of the Erie, Delaware, Lackawanna and Western, and Delaware and Hudson railways. Electric cars leave corner of Court and Chenango streets every twenty minutes.

Hospital long-distance telephone No. 453.

Asylum Directory**ST. LAWRENCE STATE HOSPITAL—OGDENSBURG, ST. LAWRENCE COUNTY.**

Number patients, men 794, women 683, total 1,477; number employees, men 173, women 184, total 357.

William Mabon, M. D., Medical Superintendent.

R. H. Hutchings, M. D., First Assistant Physician.

Warren L. Babcock, M. D., Second Assistant Physician.

E. M. Somers, Jr., M. D., Assistant Physician.

Walter H. Kidder, M. D., Assistant Physician.

Sidney D. Wilgus, M. D., Junior Assistant Physician.

Walter J. Howells, M. D., Junior Assistant Physician.

Caroline S. Pease, M. D., Woman Assistant Physician.

Frederick A. Hunt, Medical Interne.

Roy L. Leak, Medical Interne.

W. H. Daniels, President Board of Managers. Address 163 State street, Ogdensburg. Telephone 314.

William C. Hall, Steward.

James M. Wells, Treasurer, Ogdensburg, N. Y.

George R. Malby, Counsel, Ogdensburg.

Located three and one-half miles from center of Ogdensburg on the Rome, Watertown and Ogdensburg, and Central Vermont railways. Accessible by trolley line every half hour. Public carriages may also be obtained at railway stations.

Hospital long-distance telephone "State Hospital."

ROCHESTER STATE HOSPITAL—ROCHESTER, MONROE COUNTY.

Number patients, men 265, women 275, total 540; number employees, men 61, women 58, total 119.

E. H. Howard, M. D., Medical Superintendent.

E. B. Potter, M. D., First Assistant Physician.

C. T. LaMoure, M. D., Assistant Physician.

A. C. Remington, M. D., Junior Physician.

E. P. Ballantine, M. D., Woman Assistant Physician.

Frederick Cook, President Board of Managers. Address 19 West Main street. Long-distance telephone No. 323.

Asylum Directory

W. S. Remington, Steward.

Frederick P. Allen, Treasurer, Rochester, N. Y.

J. M. E. O'Grady, Counsel, Rochester. Address 211 E. and B. Building. Long-distance telephone No. 1384.

Two miles from railway stations. Accessible by electric cars of the South and Lake avenue line.

Hospital long-distance telephone No. 602.

LONG ISLAND STATE HOSPITAL.

Number patients, men 1,529, women 2,215, total 3,744; number employees, men 397, women 353, total 750.

Oliver M. Dewing, M. D., General Superintendent.

Truman J. Backus, President Board of Managers. Address 57 Livingston street, Brooklyn. Telephone 2138 Brooklyn.

F. A. Wheeler, Steward.

Henry E. Abell, Jr., Treasurer, Arbuckle Building, Brooklyn, N. Y.

Marcus B. Campbell, Counsel, 26 Court street, Brooklyn. Telephone "2666 Main."

All official communications with regard to the Long Island State Hospital should be addressed to the General Superintendent, Kings Park, N. Y.

KINGS PARK DEPARTMENT—Kings Park, Long Island.

Number patients, men 1,152, women 1,476, total 2,628; number employees, men 286, women 225, total 511.

Herman C. Evarts, M. D., Medical Superintendent.

F. Packer, M. D., First Assistant Physician.

John McGuire, M. D., Second Assistant Physician.

B. G. Williams, M. D., Assistant Physician.

W. H. Hagenbuch, M. D., Junior Physician.

A. J. Capron, M. D., Junior Physician.

H. M. Tolfree, M. D., Junior Physician.

George O'Hanlon, M. D., Junior Physician.

Samuel F. Mellen, M. D., Junior Physician.

Edward Hoffman, M. D., Junior Physician.

Asylum Directory

———— Junior Physician.

Anna Craig, M. D., Woman Physician.

D. C. MacClymont, M. D., Medical Interne.

Forty-five miles from New York city. Accessible by trains on the Long Island railway. Surface and elevated road from Grand Central station, New York, to Thirty-fourth street ferry, connecting with Long Island City station of the Long Island railway. Also from Flatbush avenue station, via Jamaica, Long Island railway.

Telegraph office at hospital. Railroad tickets at reduced rates can be obtained at the hospital or at the treasurer's office.

Hospital long-distance telephone No. 11 Northport.

BROOKLYN DEPARTMENT—Brooklyn, Long Island.

Number patients, men 377, women 739, total 1,116; number employees, men 111, women 128, total 239.

R. M. Elliott, M. D., Medical Superintendent.

Ira O. Tracy, M. D., First Assistant Physician.

D. Edward Warren, M. D., Second Assistant Physician.

Frederick M. Nehrbas, M. D., Assistant Physician.

Caroline L. Stengel, M. D., Woman Physician.

Edward L. Parker, M. D., Medical Interne.

Accessible by street car from East Twenty-third street and Fulton ferries; Fulton street car from Brooklyn Bridge to Nostrand avenue, thence to Flatbush.

Hospital long-distance telephone No. 68, Flatbush.

FULL SCHEDULE OF TRAINS.

For Kings Park.

Leaves.	A. M.	A. M.	P. M.	P. M.
Long Island City.....	9.04	11.06	4.34	5.40
Sundays, 9 a. m.				

Leaves.	A. M.	A. M.	P. M.	P. M.
Flatbush avenue.....	8.54	11.02	4.27	5.38
Sundays, 8.53 a. m.				

From Kings Park.

Leaves.	A. M.	A. M.	P. M.	P. M.
Kings Park.....	6.44	7.34	2.23	3.56
Sundays, 4.21 p. m.				

Asylum Directory

MANHATTAN STATE HOSPITAL.

Number patients, men 2,712, women 2,681, total 5,393; number employes, men 632, women 388, total 1,020.

A. E. Macdonald, M. D., General Superintendent.

Henry E. Howland, President Board of Managers. Long-distance telephone 1696-18th street.

H. E. Cole, Steward.

W. H. Kimball, Treasurer, 45 Broadway, New York.

George C. Austin, Attorney, New York City. Long-distance telephone 4,471 Cortlandt.

All official communications with regard to the Manhattan State Hospital should be addressed to the General Superintendent. Post-office address, Station U, New York City.

Hospital long-distance telephone No. 1696-18th street. City office, 1 Madison avenue, corner of Twenty-third street. Long-distance telephone No. 1696-18th.

Ward's Island and Blackwell's Island accessible by steamer from foot of East One Hundred and Sixteenth street every half hour.

Visiting days—At Ward's Island: Mondays, Tuesdays, Fridays and Saturdays. Blackwell's Island: Thursdays only. Passes can be obtained at hospital or at the city office, No. 1 Madison avenue.

WARD'S ISLAND DIVISION.

MALE DEPARTMENT.

Number patients, men 1,952; number employees, men 360,* women 11, total 371.

Percy Bryant, M. D., Medical Superintendent.

John T. W. Rowe, M. D., First Assistant Physician.

Louis C. Pettit, M. D., Second Assistant Physician.

D. S. Spellman, M. D., Assistant Physician.

W. J. Furness, M. D., Assistant Physician.

* Includes 32 employees of the Gen. Administration Dept.

Asylum Directory

P. A. Phillips, M. D., Assistant Physician.
B. R. Logie, M. D., Assistant Physician.
John W. Wickliffe, M. D., Junior Physician.
J. R. Knapp, M. D., Junior Physician.
Arthur B. Wright, M. D., Junior Physician.
Frank G. Hyde, M. D., Junior Physician.
Amasa P. Muir, M. D., Junior Physician.
J. H. Crosby, M. D., Junior Physician.
J. M. Holt, M. D., Junior Physician.
C. Floyd Haviland, M. D., Junior Physician.

FEMALE DEPARTMENT.

Number patients, women, 1,545; number of employees, men 84 women 227, total 311.

E. C. Dent, M. D., Medical Superintendent.
Geo. B. Campbell, M. D., Second Assistant Physician.
Archibald Campbell, M. D., Second Assistant Physician.
William B. Moseley, M. D., Assistant Physician.
Reuben F. Monette, M. D., Assistant Physician.
Horatio G. Gibson, M. D., Assistant Physician.
Arthur C. Delacroix, M. D., Assistant Physician.
Hunter A. Bond, M. D., Assistant Physician.
Frank H. Magnes, M. D., Assistant Physician.
Louis Walther, M. D., Assistant Physician.
Theodore I. Townsend, M. D., Junior Physician.
Paul G. Taddiken, M. D., Junior Physician.
John A. Hill, M. D., Junior Physician.
Stanley H. MacGillvary, M. D., Junior Physician.
B. Ross Nairn, M. D., Junior Physician.
Anton Heger, M. D., Junior Physician.
William H. Coe, M. D., Junior Physician.
Erving Holley, M. D., Junior Physician.
Anna E. Hutchinson, M. D., Woman Physician.

Asylum Directory

BLACKWELL'S ISLAND DIVISION.

(Branch of Female Department, Ward's Island.)

Number patients, women 840; number employees, men 34, women 106, total 140.

Accessible by steamer from foot of East One Hundred and Sixteenth street, 1 p. m. Thursdays only.

Visiting day: Thursday.

Visiting hours: 1 to 3 p. m.

Telephone No. 1697-18th street.

CENTRAL ISLIP DIVISION.

Number patients, men 760, women 296, total 1,056; number employees, men 154, women 44, total 198.

G. A. Smith, M. D., Medical Superintendent.

M. B. Heyman, M. D., Assistant Physician.

C. G. Brink, M. D., Assistant Physician.

C. E. Norris, M. D., Junior Physician.

H. R. Humphries, M. D., Junior Physician.

W. G. Ryon, M. D., Junior Physician.

Hospital long-distance telephone 19 Islip.

Telegraph Central Islip, Long Island.

SCHEDULE OF TRAINS.

For Central Islip.

Leave.	A. M.	A. M.
Long Island City.....	8.40	11.06
Sundays, 9.14 a. m.		

From Central Islip.

Leave.	P. M.	P. M.
Central Islip.....	2.28	4.09
Sundays, 5.58 p. m.		

Railroad tickets at reduced rates can be obtained at the hospital or at the city office, No. 1 Madison avenue.

Asylum Directory

**GOWANDA STATE HOMEOPATHIC HOSPITAL—GOWANDA,
CATTARAUGUS COUNTY.**

Number patients, men, 146, women, 135, total, 281.

Daniel H. Arthur, M. D., Medical Superintendent.

George Francis Adams, M. D., First Assistant Physician.

Clarence A. Potter, M. D., Junior Physician.

Clarence Klaer, M. D., Medical Interne.

Edwin H. Wolcott, M. D., President Board of Managers, 57
S. Union street, Rochester, N. Y.

Earl R. Quackenbush, Steward.

Fred J. Blackmon, Secretary and Treasurer, 626-630 Ellicott
square, Buffalo, N. Y. Long-distance telephone "Seneca 426."

L. F. Stearns, Counsel, Dunkirk, N. Y. Long-distance tele-
phone No. 9.

Hospital two miles from Gowanda, on Buffalo and Jamestown
road. Accessible by carriage from Gowanda.

Hospital long-distance telephone at Gowanda No. 17A.

**MATTEAWAN STATE HOSPITAL—MATTEAWAN, DUTCHESS
COUNTY.**

(For insane, committed on orders of courts of criminal jurisdic-
tion, and insane convicts.)

Number patients, men 650, women 52, total 702; number em-
ployees, men 116, women 18, total 134.

Post-office and railroad station, Fishkill-on-the-Hudson.

H. E. Allison, M. D., Medical Superintendent.

Robert B. Lamb, M. D., First Assistant Physician.

Jesse M. W. Scott, M. D., Junior Assistant Physician.

Walter M. Clark, Jr., M. D., Assistant Physician.

Charles H. North, M. D., Medical Interne.

Fifty-eight miles from New York city, on the New York Cen-
tral and Hudson River railway. It is also accessible by the West
Shore railway and the Erie, to Newburg; thence by ferry to Fish-
kill-on-the-Hudson. The institution may be reached by an electric

Asylum Directory

railway, which runs within one-half mile, from the Hudson River railway station; also public conveyances at the station.

Hospital long-distance telephone call No. 36.

PATHOLOGICAL INSTITUTE (FOR THE STATE HOSPITALS)—No. 1 MADISON AVENUE, NEW YORK.

Ira Van Gieson, M. D., Director.

Henderson B. Deady, M. D., Chief Associate in Pathology.

Henry Lyle Winter, M. D., Associate in Anthropology.

Boris Sidis, M. A., Ph. D., Associate in Psychology.

Bronislauf Onuf, M. D., Associate in Pathology.

(Vacancy), Associate in Biology.

Henry H. Brooks, M. D., Associate in Bacteriology.

Phoebus A. Levene, M. D., Associate in Physiological Chemistry.

S. Bookman, M. A., Ph. D., Acting Associate in Physiological Chemistry.

C. Judson Herrick, A. B., Associate in Comparative Neurology.

Amalie Busck, Librarian.

Marie Onuf, Archivist and Preparator.

Long-distance telephone call 1728-18.

LICENSED PRIVATE ASYLUM SYSTEM.

**SOCIETY OF THE NEW YORK HOSPITAL—BLOOMINGDALE,
WHITE PLAINS, N. Y.**

S. B. Lyon, M. D., Medical Superintendent.

C. E. Atwood, M. D., First Assistant Physician.

Accessible by Harlem railway. Number of patients, 320. Minimum for those who pay remunerative rates, \$10 per week. This institution receives and treats, gratuitously, a small number of indigent insane, and receives a considerable number of acute and hopeful cases, which pay only part of their expenses.

Long-distance telephone No. 104, White Plains.

Asylum Directory

PROVIDENCE RETREAT—BUFFALO, ERIE COUNTY.

(Under the charge of the Sisters of Charity.)

Harry A. Wood, M. D., Physician in Charge.

John J. Twohey, M. D., Assistant Physician.

Located on Main street, corner of Kensington avenue. Distance from Union railway station, four miles. Accessible by electric street car line. Number of patients limited to 125. Minimum rate for care and treatment of private patients, \$6 per week.

Long-distance telephone "Park 49."

MARSHALL INFIRMARY—TROY, RENSSELAER COUNTY.

J. D. Lomax, M. D., Physician in Charge.

One mile from the Union railway station. Accessible by electric street car, from corner Congress and Third streets. Cars run every ten minutes, and every other one passes the Union depot. Number of patients limited to 60. Minimum rate for care and treatment of private patients, \$6 per week.

Long-distance telephone call, "Marshall Infirmary," 937.

LONG ISLAND HOME—AMITYVILLE, LONG ISLAND.

O. J. Wilsey, M. D., Physician in Charge.

Thirty-two miles from New York. Accessible by Montauk division of Long Island railway; ferry from East Thirty-fourth street, New York; also from Brooklyn. Only five minutes from railway station. Number of patients limited to 114. Monday, Wednesday and Friday, 1.30 to 2.30 p. m., 130 East Thirty-sixth street, New York. Telephone 1434 Thirty-eighth street. Minimum rate, \$10 per week.

Long-distance telephone No. 2-M, Amityville.

Asylum Directory

BRIGHAM HALL HOSPITAL—CANANDAIGUA, ONTARIO
COUNTY.

D. R. Burrell, M. D., Physician in Charge.

Situated on Bristol street, one mile from the New York Central and Northern Central railway station. Accessible by public carriages, always to be found at the station. Number of patients limited to 78. Minimum rate, \$12 per week.

Long-distance telephone No. 35, or "Brigham Hall."

SANFORD HALL—FLUSHING, NEW YORK CITY.

Willet Stuart Brown, M. D., Physician in Charge.

Alvin W. Klein, M. D., Assistant Physician.

Situated about one-quarter of a mile from Long Island railway station, and easily accessible by carriage from any part of Greater New York. In coming from Borough of Manhattan, take ferry at East Thirty-fourth street, and train to Flushing, Main street. From Borough of Kings, take Myrtle avenue trolley for Flushing. Dr. Brown may be seen at the office in Borough of Manhattan, No. 36 East Twenty-ninth street, on Tuesday or Saturday, between 10 and 12. Number of patients limited to 44. Minimum rate, \$25 per week.

Long-distance telephone, "17 Flushing."

ST. VINCENT'S RETREAT—HARRISON, WESTCHESTER COUNTY.

(Under the charge of the Sisters of Charity.)

H. Ernst Schmid, M. D., Attending Physician, White Plains.

Swepton J. Brooks, M. D., Physician in Charge.

For women only. Fifty minutes from New York on the New York and New Haven railway. Trains leave Grand Central station, New York city, for Harrison, every hour, from 9 a. m. to 7 p. m. Number of patients limited to 60. Applications for admission should be made to the Sister in Charge.

Long-distance telephone No. 128, Port Chester.

Asylum Directory

**BREEZEHURST TERRACE—WHITESTONE, NEW YORK CITY,
LONG ISLAND.**

D. A. Harrison, M. D., Physician in Charge.

D. R. Lewis, M. D., Assistant Physician.

Accessible from New York city, from East Thirty-fourth street ferry, via Long Island railroad. From James slip near the Brooklyn bridge to Long Island City. Trains run every half hour to Whitestone, time twenty-five minutes. May also be reached by driving, via Ninety-ninth street ferry to College Point, from which place it is about ten minutes' drive. Going from Brooklyn, take Greenpoint car or Crosstown car to Long Island City or Corona; thence to Long Island railroad. In taking patients from Brooklyn, it is better to drive, as it only takes a little more than one hour, via Grand street to Newtown, thence through Flushing to Whitestone. Cars arrive from Brooklyn in one hour. Minimum rate, \$20 per week. Number limited to 25. (Voluntary patients received.) Breezehurst Terrace, five minutes' walk from Whitestone station. Brooklyn office, 142 Clinton street; New York office, 110 West Fifty-seventh street.

Long-distance telephone Whitestone, 46-F, Flushing.

WALDEMERE—MAMARONECK, WESTCHESTER COUNTY.

E. N. Carpenter, M. D., Physician in Charge.

Forty minutes from New York on the New York, New Haven and Hartford railway. Trains leave Grand Central station, New York city, every hour, for Mamaroneck. Waldemere is one mile from station, where public carriages may be found. Number of patients limited to 18. Minimum rate, \$25 per week.

No telephone connection.

Asylum Directory

DR. WELLS' SANITARIUM FOR MENTAL DISEASES—**945 ST. MARK'S AVENUE, BROOKLYN.****(Between Kingston and Albany avenues.)****Thomas L. Wells, M. D., Physician in Charge.****V. E. Taylor, M. D., Assistant Physician.**

The Sanitarium may be reached by the Bergen street car line, the Atlantic avenue railway or elevated railway from Brooklyn bridge. Stop at Albany avenue station of elevated road. Number limited to 16 women patients. Minimum rate, \$10 per week. Long-distance telephone No. 69, Bedford.

**GREENMONT-ON-THE-HUDSON—POST OFFICE, SING SING,
WESTCHESTER COUNTY.****Ralph Lyman Parsons, M. D., Physician in Charge.****Ralph Wait Parsons, M. D., Associate Physician.**

Location, one mile from New York Central railroad station at Sing Sing. Public carriages may be hired at the station, or a private carriage will be sent by appointment. Only selected cases of mental or nervous diseases are received, and the number is limited to 10. Minimum rate for board, services of a private nurse, medical care and treatment, including Hydrotherapy, \$75 per week. Communication by telegraph or telephone through the Sing Sing office. Dr. Parsons or his associate will be at No. 21 East Forty-fourth street on Mondays and Fridays, between 3.30 and 4.30 o'clock p. m., or by appointment.

Long-distance telephone, Hart, 140 A Sing Sing, N. Y.

**DR. MACDONALD'S HOUSE—PLEASANTVILLE, WESTCHESTER
COUNTY.****Carlos F. MacDonald, M. D., Physician in Charge.**

One mile from Pleasantville station on Harlem railway; two miles from Whitson's station on New York and Northern rail-

Asylum Directory

way; six miles from Tarrytown and four miles from Sing Sing, on Hudson River division New York Central railway. Pleasantville is 30 miles north of New York city (about fifty minutes' ride). Number of patients limited to 10. House is conducted on the private family plan and only selected cases of mental disease received. Minimum rate for board, medical attendance and private nurse, \$75 per week. Telegraph and public telephone, Pleasantville. Dr. MacDonald will be at 85 Madison avenue, New York city, daily, Sundays excepted, from 11 to 1 o'clock, and by appointment.

THE PINES—AUBURN, CAYUGA COUNTY.

Frederick Sefton, M. D., Physician in Charge.

Guy R. Montgomery, Assistant Physician.

Accessible by the Auburn branch of the New York Central and Hudson river railway, and the Southern Central division of the Lehigh Valley railway. A little over three hours by rail from Rochester, four from Albany and Buffalo, seven from New York city. Number of patients limited to 12. Minimum rate per week, including medical attendance, special nurse, private room and special tray service, \$20.

Long-distance telephone No. 261.

VERNON HOUSE—BRONXVILLE, WESTCHESTER COUNTY.

William D. Granger, M. D., Physician in Charge.

Post-office and telegraph, Bronxville. Fifteen miles from Grand Central station, New York city. Harlem railroad trains half-hourly. House one mile from station. Accessible by New Haven railway to Mt. Vernon, or by Harlem railroad to Bronxville. Public carriages may be obtained at railway station. Number of patients limited to 12. Cases selected. There is an entire absence of institutional features, affording homelike surroundings and care. Terms, \$40; no extras.

Asylum Directory

New York office 12 East 47th street. Tuesdays and Thursdays
3-4 p. m.

Long-distance telephone, 34 B, Mount Vernon.

INTERPINES—GOSHEN, ORANGE COUNTY.

Frederick Whittlesey Seward, M. D., Physician in Charge.

Frederick W. Seward, Jr., M. D., Assistant Physician.

J. Perry Seward, M. D., Associate Physician, 113 West 85th
street, New York city.

Sixty miles from New York city, on line of Erie railway.
Number of patients limited to 16. Minimum rate \$20 per week.

Long-distance telephone call, Goshen-5.

GLENMARY—OWEGO, TIOGA COUNTY.

(Homeopathic.)

(Incorporated 1897.)

J. T. Greenleaf, M. D., Physician in Charge.

Louis D. Hyde, M. D., Assistant Physician.

Three-fourths of a mile from railway stations, where public
carriages may be obtained. Accessible by New York, Lake Erie
and Western and by Delaware, Lackawanna and Western rail-
ways, and Auburn division, Lehigh Valley railway. Number of
patients limited to 50. Minimum rate, \$10 per week.

Long-distance telephone call, "77" Owego, N. Y.

FALKIRK—CENTRAL VALLEY, ORANGE COUNTY.

James F. Ferguson, M. D., Physician in Charge.

M. Langdon Bird, M. D., Assistant Physician.

One mile from the Central Valley station, on Newburg branch
of the Erie railroad, 47 miles from New York. Post office and

Asylum Directory

telegraph, Central Valley. Number of patients limited to 34. Rates on application. Dr. Ferguson may be consulted at 168 Lexington avenue, New York, on Tuesdays and Fridays, from half-past eleven to half-past twelve. No telephone.

RIVER CREST—ASTORIA, LONG ISLAND, NEW YORK CITY.

J. Jos. Kindred, M. D., Physician in Charge.

Chas. W. Gardiner, M. D., Assistant Physician.

Situated on the east bank of the East river, opposite the foot of East One Hundred and Twenty-first street, New York city. Accessible via the Ninety-second street ferry to Astoria, from which it is one mile over the Shore road. From New York take Lexington avenue cars to Eighty-sixth street; transfer thence to Astoria ferry. From Brooklyn take the Greenpoint car or Cross-town car to Long Island City, there transferring to the trolley line to the Ninety-second street ferry, Astoria. Patients from New York city and Brooklyn may best be transferred by carriage, as the distance to the foot of East Ninety-second street is only one and one-half miles, and the distance to the city limits of Brooklyn is less than two and a half miles. Telegraph and post-office address, Astoria. Minimum rate, \$20 per week. Number limited to 32.

Long-distance telephone 36, Astoria.

DR. COMBES' SANITARIUM.

(Junction of Jackson and Flushing avenues, Borough of Queens.)

Post-office, Flushing, N. Y., New York city.

R. C. F. Combes, M. D., Physician in Charge.

Wm. F. Moran, M. D., Assistant Physician.

Telephone call, 139 Flushing.

Asylum Directory

From Manhattan borough take Thirty-fourth street or James Slip ferries; then Long Island Railroad or New York and Queens County Electric Railroad to Bridge street station, Flushing. From Brooklyn borough take Flushing avenue electric car to Elmhurst; then New York and Queens county electric car to Bridge street, Flushing.

INDEX

- Acute insane, special provision for,** 24, 27.
- Admissions, number of,** 12.
- Ages of patients, state hospitals,** table, 457-59; **Matteawan state hospital,** table, 490-91.
- Allens,** 422-25; removal of, cost, 423.
- Appropriations for state hospitals,** 11, 13-22; amount required for 1898-99, 20-22.
- Attendants, ratio of,** 26.
- Atwater, W. O.** Preliminary report on dietaries for hospitals for the insane, 31-200.
- Bathing, of patients,** 333-35, 349-50, 382.
- Bedding, for cattle and horses,** 295-96.
- Beef, purchase of,** 239, 243-44, 331-32, 365.
- Binghamton state hospital,** appropriation needed for, 22; average daily attendance, 119; capacity, 215-16; county and classification of patients, 464-65, 470-71; deaths, percentage of, 406; directory, 508; employees, summary, 405; food, cost of, 408; food materials and nutrients used, 120-26; fuel and light, cost, 405; general statement, 434-35, 508; insane, number of, 431-33; insanity in, form of, 440, 442; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- Blackwells' Island division,** directory and general statement, 514.
- Bloomington asylum,** general statistics, 476.
- Boilers, insurance,** 234-36, 248-49, 261-64.
- Bones, use of as fertilizers,** 384-86.
- Books, cost per capita,** 18.
- Bread, analyses of,** 379-82.
- Breezehurst Terrace,** general statement, 476, 519; directory, 519.
- Brigham Hall,** general statement, 476, 518; directory, 518.
- Buffalo state hospital,** appropriation needed for, 22; average daily attendance, 127; capacity, 215; county and classification of patients, 464-65, 470-71; deaths, percentage of, 406; directory, 507-8; employees, summary, 405; food, cost, 408; food materials and nutrients used, 128-32; fuel and light, cost, 405; general statement, 434-35, 507-8; insane, number of, 431-33; insanity in, form of, 440, 442; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- Buildings, appropriations needed for,** 20-21.
- Butter, creamery,** 264-67, 383.
- Capacity, of state hospitals,** 213-17, 346-47.
- Central Islip,** capacity, 215; directory, 514; general statement, 514.
- Cheese,** 246-47, 365, 384, 398-99.
- Civil condition of patients, state hospitals,** table, 453; **Matteawan state hospital,** table, 487.
- Clothing, cost per capita,** 17; cleaning of, 338-40; manufacture of, in state hospital, 426.
- Coffee,** 251, 349, 382-83; amount used, 237-38; roasting of, at Utica state hospital, 426-27.
- Collins state homeopathic hospital,** appropriations needed for, 22; capacity, 215; county and classification of patients, 466-67, 474-75; directory, 515; general statement, 436-37, 515; insane number of, 431-33; insanity in, form of, 441, 443. *See also* State hospitals.

Index to Tenth Annual Report

- Commission in lunacy, expenditures for state hospitals must be approved by. 13; monthly meetings with superintendents, 221.
- Conferences, monthly, 221-403.
- Cost, of insane per capita, 11, 14; of maintenance, 14-19, 366; of food supplies, 15-16, 27, 28, 30, 300-4, 368.
- Counties, residence by, and classification of patients, state hospitals, table, 464-75; Matteawan state hospital, table, 496-99.
- Crash suits, 383-84.
- Crockery, for hospital use, 225-31, 249-50.
- Deaths**, causes of, in state hospitals, table, 449-51; Matteawan state hospital, table, 486;
 number and percentage; in state hospitals, 12, 406; in licensed private asylums, 414.
- Dentistry, in state hospitals, 218.
- Dietaries, of state hospitals, 29-30; basic, report of committee, 287-92; comparisons, 81-90; criticism of, 269-73; preliminary report, 31-200; statistics, 116-200.
- Dietary standards, 49; comparisons, table, 81-82.
- Dining room service, 342-46.
- Directory of state hospitals and private institutions, 501-24.
- Dr. Combes' sanitarium, reinstatement, 413; general statement, 476, 523-24; directory, 523-24.
- Dr. MacDonalds' House, general statement, 476, 520-21; directory, 520-21.
- Dr. Parsons' Retreat, general statistics, 476.
- Dr. Wells' Sanitarium, general statement, 476, 520; directory, 520.
- Dress goods, 280-81, 309-18, 323-24.
- Education**, degree of, of patients admitted to state hospitals, table, 454; of patients admitted to Matteawan state hospital, table, 488.
- Electric lamps, 377-79, 396-98.
- Employees, wages of, in state hospitals, 15; statistical summary, 405.
- Employment, industrial, for insane, 426-27.
- Envelopes, uniform set, 386-92.
- Epileptics, improper subjects for state hospitals, 418-19.
- Expenditures, of state hospitals, 1897-98, 9-10, 368; diminution of, 11.
- Experimental dietary, 92-101.
- Falkirk**, general statement, 476, 522-23; directory, 522-23.
- Farinaceous foods, cost, 307.
- Farm and garden products, report of stewards, 393-95.
- Farm and grounds department, expenditures for, 17.
- Fish, salt, 260, 276.
- Fixed charges, cost, 15-19.
- Flour, adulteration of, 238; inspection, 341; purchase of, 252-53, 255, 256-59, 277, 325-28, 332-33.
- Food, chemical composition of, table, 104-12; classification by composition, table, 40; classification by cost of actual nutriment, table, 43; classification by nutritive equivalents, table, 63-69; cost of in state hospitals, 15-16, 26-27, 30, 300-4, 407-9; nutrients contained in, table, 113-16; nutritive ratios, table, 54-56; serving of, 342-46. *See also* Dietaries.
- Fruits, per capita, allowance, 224, 236, 320-21.
- Fuel and light, cost, 18, 405.
- Furniture and bedding, cost per capita, 18.
- General hospital system**, 415-27.
- Glassware, 231-33, 249-50.
- Glenmary, general statement, 476, 522; directory, 522.
- Gold aluminum, 347-49.
- Gowanda state homeopathic hospital, *see* Collins state homeopathic hospital.
- Grains, brewers, for feeding purposes, 350-51.
- Grates, 296-97.
- Greenmont-on-the-Hudson, directory and general statement, 520.
- H-O** dairy feed, test, 278-79.

Index to Tenth Annual Report

- Hudson River state hospital**, appropriation needed for, 22; average daily attendance, 133; capacity, 215; county and classification of patients, 464-65, 468-69; deaths, percentage of, 406; directory, 505-6; employees, summary, 405; food, cost, 407; food materials and nutrients used, 134-41; fuel and light, cost, 405; general statement, 434-35, 505-6; insane, number of, 431-33; insanity in, form of, 440, 442; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- Idiot**, definition of term, 420-21; improper subject for state hospital, 418.
- Immigrants, insane**, law concerning, 424-25.
- Industrial employment of the insane**, 426-27.
- Inks, indelible**, 245-46, 297.
- Insane, acute**, special provision for, 24, 27; admissions, number of, 12; alien and non-resident, 422-25; annual increase of, 14; average number of, 12; cost, per capita, 11, 14; industrial employment for, 426-27; number discharged from state hospitals, 12; preliminary report on dietaries for, 31-200; transfer of, 361; whole number of, 9;
 number of: licensed private asylums, 9; Matteawan state hospital, 477; state hospitals, 9, 431-33.
- Insanity**, statute meaning of, 417-21;
 causes of: state hospitals, table, 438-39; Matteawan state hospital, table, 480;
 duration of, previous to admission; state hospitals, table, 447-48, 455-56, 460; Matteawan state hospital, table, 485, 489, 492;
 forms; state hospitals, table, 440-43; Matteawan state hospital, table, 481;
 hereditary tendency to; state hospitals, table, 452; Matteawan state hospital, table, 487.
- Interpines**, general statement, 476, 522; directory, 522.
- Joint contracts, purchase of supplies by**, 28.
- Licensed private asylum system**, 411-14; deaths, number and percentage, 414; general administration, 413; general review, 414; general statistics, 476; insane, number of, 9, 503; medical service, 414; occupation for patients, 413; recoveries, 414.
- Long Island Home**, general statement, 476, 517; directory, 517.
- Long Island state hospital**, appropriation needed for, 22; average daily attendance, 142; capacity, 215, 216; county and classification of patients, 466-67, 472-73; deaths, percentage of, 406; directory, 510-11; employees, summary, 405; food, cost, 409; food materials and nutrients used, 143-50; fuel and light, cost, 405; general statement, 436-37, 510-11; insane, number of, 431-33; insanity in, form of, 441, 443; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- McGarr, T. E.**, address and telephone number, 503.
- Maintenance**, appropriations needed for, 20; cost, per capita, 14 19; standard of, 23-28, 369-74.
- Manhattan state hospital**, appropriation needed for, 22; average daily attendance, 151; capacity, 215; county and classification of patients, 466-67, 474-75; deaths, percentage of, 406; directory, 512; employees, summary, 405; food, cost, 409; food materials and nutrients used, 152-60; fuel and light, cost, 405; general statement, 436-37, 512; insane, number of, 431-33; insanity in, form of, 441, 443; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- Marshall Infirmary**, general statement, 476, 517; directory, 517.
- Matteawan state hospital**, ages of patients, 490-91; causes of insanity, 480; civil condition of patients, 487; county and classification of patients, 496-99; deaths, causes of, 486; directory, 515-16; duration of insanity of patients previous to admission, 485, 489, 492; education, degree of, 488; forms of insanity, 481; general statement, 478-79, 515-16; heredi-

Index to Tenth Annual Report

- tary tendency of patients to insanity, 487; movement of population, 477; nativity of patients, 495; occupation of patients admitted, 493-94; period of residence in asylum of patients under treatment, 492; results of treatment, 482-84.
- Medical officers, ratio of, to patients, 26.
- Medical service, candidates, 353-60; licensed private asylum system, summary, 414; in state hospitals, 218-20, 404.
- Medical superintendents, report on basic dietary, 287-88.
- Medical supplies, cost per capita, 18.
- Middletown state homeopathic hospital, appropriation needed for, 22; average daily attendance, 161; capacity, 215; county and classification of patients, 464-65, 470-71; deaths, percentage of, 406; directory, 506-7; employees, summary of, 405; food, cost, 407; food materials and nutrients used, 162-68; fuel and light, cost, 405; general statement, 434-35, 506-7; insane, number of, 431-33; insanity, form of, 440, 442; medical service, summary, 404; recoveries, percentage of, 406. *See also* State hospitals.
- Monthly conferences, 221-403.
- Napkins, paper, 244, 253, 279-80, 343-44.
- Nativity of patients admitted to state hospitals, table, 462-63; Matteawan state hospital, table, 495.
- New York condensed milk co., contract, 399-402.
- Non-resident patients, 422-25.
- Nurses, uniforms and badges, 360-61.
- Occupation of patients admitted to Matteawan state hospital, table, 493-94; admitted to state hospitals, table, 461; desirability of, in private asylums, 413.
- Officers' salaries, expenditures for, 15.
- Oils, price of, 402-3.
- Ophthalmologist, for state hospitals, 218.
- Osborn, W. C., address and telephone number, 503.
- Parkhurst, W. L., address, 503.
- Pathological institute, 201-9; annual report, 204-8; directory and general statement, 516; expenditures, 209; library, 208; location, 202; subjects of study, 203.
- Patients, *see* Insane.
- Pines, The, general statement, 476, 521; directory, 521.
- Prison-made goods, 320, 329-30.
- Private institutions, *see* Licensed private asylum system.
- Private patients, admission to state hospitals, 503.
- Providence Retreat, general statement, 476, 517; directory, 517.
- Provisions and stores, expenditures for, in state hospitals, 15-17, 306.
- Receipts, for support of state hospitals, 1897-98, 9.
- Recoveries, ratio, basis of, 210-11; number and percentage; state hospitals, 12, 210, 406; licensed private asylums, 414.
- Repairs, ordinary, cost, 17.
- Residence in asylum, period of, of patients under treatment, state hospitals, 460; Matteawan state hospitals, 492.
- River Crest, general statement, 476, 523; directory, 523.
- Rochester state hospital, appropriation needed for, 22; average daily attendance, 169; capacity, 215; county and classification of patients, 466-67, 472-73; deaths, percentage of, 406; directory, 509-10; employees, summary, 405; food, cost, 408; food materials and nutrients used, 170-76; fuel and light, cost, 405; general statement, 436-37, 509-10; insane, number of, 431-33; insanity in, form of, 441, 443; medical service, summary, 404; recoveries, percentage, 406; soap manufacture at, 427. *See also* State hospitals.
- St. Lawrence state hospital, appropriation needed for, 22; average daily attendance, 177; capacity, 215, 216; county and classification of patients, 466-67, 472-73; deaths, percentage, 406; directory, 509; employees, summary, 405; food, cost, 408; food materials and

Index to Tenth Annual Report

- nutrients used, 178-84; fuel and light, cost, 405; general statement, 436-37, 509; insane, number of, 431-33; insanity, form of, 441, 443; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- St. Vincent's Retreat, general statement, 476, 578; directory, 518.
- Salaries, of officers, 15.
- Sanford Hall, general statement, 476, 518; directory, 518.
- Scientific apparatus, 269.
- Senility, not classified as insane, 417-18.
- Silver ware, *see* Tableware.
- Soap, manufacture of at Rochester state hospital, 427.
- Society of the New York hospital, directory and general statement, **III**.
- Specifications for supplies, 283-86.
- Spices, preparation of, 427.
- Standard of care and maintenance, 23-28, 369-74.
- State commission in lunacy, *see* Commission in lunacy.
- State hospitals, admissions, number of, 12; ages of patients, table, 457-59; appropriations for, 11, 13-22; average number of insane, 12; capacity, 346-47; deaths, causes of, table, 449-51; civil condition of patients, table, 453; cost of maintenance, 14-19; dietaries, 29-200; duration of insanity previous to admission, table, 447-48, 455-56, 460; education of patients, degree of, table, 454; general review, 404-9; hereditary tendency of patients to insanity, table, 452; insane, number of, 9, 431-33, 503; insanity, causes, table, 438-39; medical service, 218-20; nativity of patients, 462-63; number and percentage of deaths, 12; number of patients discharged from, 12; occupation of patients admitted, 461; private patients, admission of, 503; receipts for 1897-98, 9; recoveries, percentage, 12; residence in asylum, period of, of patients under treatment, table, 460; treatment, results of, table, 444-46; expenditures; for 1897-98, 9-10; diminution of, 11.
- State Hospitals Bulletin, 836-87; change of title, 254.
- State system, 7-409; general operations, 9-12.
- Stationery, cost per capita, 18.
- Statistics, general review, 429-90.
- Stewards, joint purchase of supplies, 376-77; report on farm and garden products, 893-95.
- Sugar, 252.
- Suicides, circular letter on, 342.
- Superintendents, monthly meetings with commission, legal requirement, 221; authority to discharge patients, 239.
- Supplies, joint purchase of, 281-83, 361-62, 376-77; specifications for, 267-68, 283-86.
- Tableware, for hospital use, 240-43.
- Tea, 275-76.
- Tentative dietary, 92-101.
- Towels, apportionment of, 223, 321-22.
- Training schools, 362-64.
- Transportation of patients, 361; cost, 19.
- Treatment, results of, at state hospitals, 210-12; table showing, 444-46; at Matteawan state hospital, table, 482-84.
- Utica state hospital, appropriation needed for, 22; average daily attendance, 185; capacity, 215; coffee roasting at, 426; county and classification of patients, 464-65, 468-69; deaths, percentage of, 406; directory, 504; employees, summary of, 405; food, cost, 407; food materials and nutrients used, 186-92; fuel and light, cost, 405; general statement, 434-35, 504; insane, number of, 431-33; insanity in, form of, 440, 442; medical service, summary, 404; recoveries, percentage, 406. *See also* State hospitals.
- Vanilla, for hospital use, 251.
- Ventilation, in state hospitals, 214-15.
- Vernon House, general statement, 476, 521-22; directory, 521-22.
- Volunteers, for Hispano-American war, resolution concerning, 335.

Index to Tenth Annual Report

Wages, of employees, 15.

Waldemere, general statement, 476, 519; directory, 519.

Ward's Island division, capacity, 215; directory and general statement, 512-13.

Willard state hospital, appropriation needed, 22; average daily attendance, 193; capacity, 215; county and classification of patients, 464-65, 468-69; deaths,

percentage of, 406; directory, 504-5; employees, summary, 405; food, cost, 407; food materials and nutrients used, 194-200; fuel and light, cost, 405; general statement, 434-35, 504-5; insane, number of, 431-33; insanity in, form of, 440, 442; medical service, summary, 404; recoveries, percentage, 406. See also State hospitals.

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